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ABSTRACT

This conference, which was attended by librarians and documentalists from 12 European countries (East and West) and, for the first time, some Third World countries, emphasized the role of electronic data processing (EDP) in information and documentation, particularly in terms of one possible means by which to overcome the barriers in international cooperation. The report summarizes the plenary discussions and presents the full text of both lectures and working group reports. Papers presented at the conference were: (1) "Computers in Information: Dataprocessing and Change of Structures in Small Size Information Bureaux" (R. Schneemann); (2) "Low Cost Documentation" (M. Klatter); (3) "The Subject Approach to Information: The Role and Use of Thesauri. An Introduction to Some Basic Concepts" (R. Supper); (4) "User Education" (O. Norgaard); (5) "User Analysis" (D. Steinert); and (6) "International Information Systems (DEVSIS) (Development Science Information System)" (R. T. de Mautort). Annexes to the report include two additional papers--"DEVSIS-Type Systems and Activities" (Catherine Shearer), and "Information Exchange in a North-South Context: Is There More to Gain through Cooperation than in Trying to Establish New Markets?" (John E. Woolston)--and reports from the working groups on Interlibrary Cooperation, Research Register and Dissemination, Future of EADI (European Association of Development Research and Training Institutes) and I&D (information and documentation), EDP and DEVSIS, Regional Associations, Preparation of Madrid EADI Meeting, Scandinavian Working Group, and 10-Years EADI Documentation Working Group, 1973-1983. (THC)

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Report

European Cooperation in Development Information and Documentation

International Conference

Berlin, October 9 – 14, 1983

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R E P O R T

EUROPEAN COOPERATION IN DEVELOPMENT INFORMATION AND DOCUMENTATION

INTERNATIONAL CONFERENCE
BERLIN OCTOBER 9 - 14, 1983

Rapporteur:
Jürgen Horlemann

DOC 1208 A/a
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Bonn, November 1983

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PREFACE

Since 1976 the Education, Science and Documentation Centre of the German Foundation for International Development (DSE) and the European Association of Development Research and Training Institutes (EADI) have been cooperating in the field of development-related information and documentation (I&D).
Over the past years, this cooperation has led to a number of joint or bi-lateral measures to foster efforts towards establishing and improving European and international cooperation in I&D within the framework of development policy. Thereby, continous dialogue as well as personal contacts on the occasion of conferences, workshops, or seminars carried out by DSE have been very important instruments.

European resp. international cooperation - in working order - is still an aim. The "International Conference on European Cooperation in Development Information and Documentation" which took place at the DSE Conference Centre in Berlin-Tegel, 9-14 October 1983, was another step in strengthening and improving international cooperation, i.e., in terms of instruments, exchange of information (who is doing what in which field), division of labour, avoiding unnecessary double work etc. The aims with regard to the contents are given in the introductory speech by Dieter Danckwortt, DSE, the Convenor of the EADI - I&D Working Group (see p.).

This conference, which was attended by librarians and documentalists from 12 European (East and West) and, for the first time, some Third World countries, emphasized the role of Electronic Data Processing (EDP) in information and documentation, particularly in terms of one possible means to overcome the barriers in international cooperation.

The agenda of the conference was based on the answers given in a questionnaire which DSE had sent out in preparing the workshop, in order to meet the main interests of the participants.

The report seeks to summarize the plenary discussions, and it documents the given lectures and the results of the various working groups in full text.

Bonn, November 1983

Heidrun Peters
German Foundation for
International Development
Education, Science and
Documentation Centre
Head of Cooperation Section

1. PROCEEDINGS OF OCTOBER 9, 1983

1.1 Opening Session

On October 9, 1983, the day of arrival, all participants invited to and expected for the Conference, arrived safely and took part in the Opening Session.

1.1.1 Introduction by DSE (D. Danckwortt)

Dear Colleagues and Friends,
Ladies and Gentlemen,

the forthcoming "International Conference on European Cooperation in Development Information and Documentation" is another step in improving international cooperation. As you all know, it was decided already in 1973, on the occasion of the preparatory committee meeting of EADI in Paris, to establish a task force on problems of documentation and information; and in fact, there were planning meetings already in Berlin and Paris in 1973 and 1974, so that this "Working Group on Information and Documentation" has more or less the title to look back on ten years of international cooperation. The Working Group intended to serve two purposes:
1) Exchange of information within the Association,
2) exchange of information between the Association and the four Regional Associations (CODESRIA for Africa, ADIPA for Asia, ICARDES for the Arab States, and CLACSO for Latin America).
In 1975 the permanent "Working Group on Information and Documentation" was finally set up, and the German Foundation for International Development, Bonn, exercized the tasks of a secretariat.
Since that time a series of meetings has taken place, also here in Berlin - for instance in 1978 and in 1979. In 1979 an expert meeting on the "Standardization

of Registers for Development Information and Documentation" was organized by OECD Development Centre, followed by a "Technical Meeting on an Exchange Format for Information on Research in Progress" at UNESCO in 1980, where UNISIST Reference Manual for Machine-Readable Description of Research Projects and Institutions was accepted.
All these meetings, of which I enumerated only a few, had one goal: to analyze within global development problems the role of information and dissemination of research results for the promotion of development policy, to improve the documentation systems in the respective countries and to improve the cooperation between the European and the Third World institutions.
At the request of EADI, the Science and Documentation Centre of the German Foundation for International Development has assumed the task of coordinating European documentation and information centres for development. To this end, the Centre conducted every two years an exchange of views and experiences.
This meeting, with participants from many European and, for the first time, some Third World countries, will contribute to the tradition of improving cooperation and will, furthermore, deal with computers in information and the use of EDP in medium and small-size libraries and documentation and information centres - we all hope with useful results.
I would particularly like to welcome our guests from overseas and thank them for coming to attend this meeting and exchange views and experiences with the European participants.
On behalf of the staff of this meeting and myself I wish you a very pleasant stay in Berlin.

1.1.2 Presentation of the Participants

The Opening Speeches were followed by the Presentation of

the Participants. (For the complete list, see pp.). Concerning the expectations for the Conference, every participant wrote down his particular interests and attitudes towards the coming days. (For the written collection see pp.).

1.1.3 Agenda of the Conference

After the Presentation of the Participants the proposed Agenda (see pp.) was discussed and unanimously accepted.

1.1.4 Steering Committee

For the time of the Conference a Steering Committee was proposed and elected by acclamation. (List of members of the Steering Committee, see pp.).
The Steering Committee met several times during the Conference and decided on the concrete proceedings.

2. PROCEEDINGS OF OCTOBER 10, 1983

2.1 Discussion on "Computers in Information"

The discussion following the lecture "Computers in Information: Dataprocessing and Change of Structures in Small Size Information Bureaux" concentrated on the following topics (for the text of the lecture, see 2.1.1):
- Advantages of EDP for the user (as many references as possible) and disadvantages (at Technical University of Berlin, e.g., one search will cost DM 120,-- or $ 50,--); this fact represents a barrier for information for everybody.
- The effects of EDP on librarians (included in teaching programs, change of image, must learn how to use EDP).
- Capital-intensity of EDP machinery and software.
- Possibilities of offering EDP without high costs (e.g.

lending magnetic tapes).
- Linking between EDP and retrieval in respect to developing countries.

2.1.1

COMPUTERS IN INFORMATION: DATAPROCESSING AND CHANGE OF STRUCTURES IN SMALL SIZE INFORMATION BUREAUX

(R. Schneemann)

1. Introduction

The following text intends to demonstrate the basic influence of EDP in the field of Information and Documentation (I&D). It refers to small size allround bureaux directly involved in the care of users. It is tried to reach a better understanding with assistance of some practical examples - mostly taken from the Berlin region.
Starting point is an overview of actual tendencies in the field of libraries and information. In the next point some theses about the basical influence of new technologies are named, especially in respect to EDP. The example of our Documentation of Hospital Care should demonstrate, how operating sequence, cooperation and information transfer are under the conditions of EDP. Our example comes from the field of documentation; but there are growing tendencies in overlaping with the field of library to state - as I want to show you - and I am hopeful to bring some interesting aspects to you as librarical educated people getting a better understanding.
Where are the relations to the development politics? Our example and our thoughts are mainly chosen from the conditions of the developed countries, and even for them are very modern. But all the basic tendencies and the economical mechanisms (not the economical funds!) are valid in the developing countries too. The addition to this: it is not intended to speak about questions like
- which is better? a Siemens or an IBM computer?
- which software is optimal, if used by librarians?
- which data transfer is better: pagemode or linemode?
Much more important and in the following dealt with is the qualitative step to be done if the decision using EDP comes. So I hope to give you some useful thoughts in respect to your tasks you are doing directly in some developing countries or here in Europe in relation to development politics.

2. The Term Information Transfer

The different terms meaning libraries or information departments are showing the unsteady and changing selfunderstanding. For example the central library of technics in Germany is named "Technical Information Library", specialized Documentation departments are renamed Information transfer- or technology transfer departments in the last time. Documentalists and searchers are more and more called "information officer" and so on. It is interesting to know that the British

Aslib has chosen a new name during the annual meeting in June 1983: instead of "Association of Special Libraries and Information Bureaux" the new name is "The Association for Information Management'. It is supposed that there are some reasons in the background for these events; in the following it is tried to explain something of these things.

2.1 Relations between Libraries and Documentation Department

Viewing the realities in Germany, you can say that there are many contacts which, however, are partially sources of irritation.
The main task in the field of libraries is "the provision of books to lend out". The description is stored in catalogues, in a one-dimensional way. The documentation departments are doing "comprehending, indexing and storing the contents of documents and informations about this". The storage is more-dimensional.
The difference cannot be explained with this terminological discussion; this is only possible regarding the practice. During a long time the traditional educated and career-orientated librarian looked at the documentation task as a playground of semi-educated people. But the situation has changed dramatically mainly by the technical progress. The multi-dimensional search possibilities with EDP are having the effect to call on question the high qualitative catalogueing for economical reasons.
Now the situation is a serious conflict. The scientifical librarian is in danger to be replaced by the "cheaper', shorter educated information officer. Aspects like these are to be read in the special press; some examples in Germany are titles like "The challenge of libraries through the information transfer" or "The role of libraries in the information network".
The realtion between library and documentation is in progress, the discussion about information transfer and the changes just done are demonstrating this discussion in a very clear way.

2.2 Information - Information Transfer - Technology Transfer

The term Information is in a very strong theoretical and ideological discussion. For example, there exists Information Sciences as a university subject, some people are speaking about information market or even information industry; you will also find opinions calling information the new third productive force apart from work and capital.
In connection with these tendencies the term "information transfer" comes to be common in the field of documentation. In the Technical University Berlin, for example, the Electro-Information was renamed "Information-Transfer of Technics" in 1981, and the documentation of hospital care got the new foretitle "Information Transfer of Architecture, Building and Health Care". This should express the new possibilities: searching not only in the own very closed data-collection but also and mainly searching in many foreign data-bases in a very broad defined special field supported by modern data-transfer possibilities.
This work is just widened by the wishes of users; they not only expect literature-hints, but also

- qualitative selection of the printouts
- addition of further information (value adding)
- help to get the originals.

These expectations and the aim to foreward the research results written in the literature directly to the interested people have led to the growing importance of technology transfer. For example, in Berlin there were founded in the year 1980:

VDI = an advisory board for the members of this organization like firms and persons

TVA = a governmental granted project helping the small-size industry in implementing new and better technologies

TTS = on the one hand contact place for the industry to learn something about the results researched in the TU and to take them over, on the other hand "export bureau" of the TU to find industrial firms to prove and to implement the results.

3. Changes of Structures because of Data Processing

Data processing by itself is neither good nor bad, neither useful nor harmful; the value is only to be found looking at the concrete realization.

3.1 Sequence of Operation and Rationalization

The most important condition of implementing EDP - especially in respect to the future - is a very specific structure of the sequence of operating. The total working process is to be proven if it is decomposable and EDP adaptable. In contrast to this thesis that the machine has to be constructed for the men and not vice versa, the fact and the reality is much too often that the work procedure will be trimmed for EDP.

It is interesting that preparing the EDP-implementation the people in charge will again and again argue that EDP will improve the user friendliness. But at the date when EDP is realized, the same work volume will be done by much fewer people; and because of the bigger simplicity of the work the employees are not necessarily as well educated and, for this reason, as well paid as before.

In practice the theoretical possible advantages are dissolved by the effects of rationalization. The total schematization could lead to the fact that only few, permanently to be repeated tasks remain which are (just for the moment) not ready for EDP. One of the original aims of EDP, to overcome the monotony of work, is then perverted to the contrary.

If we are speaking about EDP in our information field, I think we have to know this disadvantages, because the realization of EDP brings with it a new division of work, new working styles and at all new qualifications and the loss of the old qualifications.

3.2 Network and Internationalization

Another main viewpoint is the tendencially possible suspension of barriers anddisadvantages. EDP means digitalization and this is the possibility to totally transfer information. The use of the phone network to transfer data and the required transformation from ana-

logue to digital information units (and vice versa) form the basis for a nearly unimpaired worldwide exchange of data.
In 1982 the TU founded another "Centre of Technological Cooperation" with the intention to coordinate the developing countries related activities in the TU and to support the transfer of adapted technologies to the Third World.
I hope that the background conditions of information are outlined, and I now want to go to talk about the influence of EDP.

Wellknown data-networks are EURONET, SCANNET, DATEX-P in Germany, TRANSPAK in France, PSS/IPSS in the UK, TYMNET and TELENET in the USA.

As very small basis equipment, it is enough to have a portable TTY-terminal (with acoustic-coupler) and a normal phone; with the simple callnumbers and passwords (which are not gratis) you can call in a code of the network (first step) and switch in;with a further password you can go in your chosen host (second step) and then choose the wanted database (third step). The only limitation is the costs (at the moment), although you may find other limitations, too (like political, national ones).
Automatically the telecommunication brings with it a strong trend of internationalization. This means on the one hand the gnip to foreign databases, and on the other hand the totally worldwide competition. Because every searcher is able to contact every database only the good, big databases can survive on a commercial basis.
Small countries - and in the information market the FRG for example is a small country - or small institutions have only a chance to find niches; this means that these people, who produced data banks, can only survive if they deal with a special subject or aspect, or if the quality is very exclusive. The exclusivity of the language has no good chance because of the growing influence of the english language in the scientific community.
Another aspect of internationalization is the necessity to produce multilingual databases because of economic reasons and the aim of completeness.
Good examples are AGRIS (of FAO), INIS (of the International Atomic Energy Commission, Vienna) or our database HECLINET (Health Care Literature Information Network). Multinationality means, in this connection, the producer character, the ownership; as for the contents one might say that every database is multinational.

3.3 Centralization and Decentralization

EDP favours central decisionmaking. This is plausible and demonstrable in many parts. One example is the growing importance of the central hosts in the FRG for bio-medicine and technics (INKA and DIMDI). Another good example is the regional online-catalogueing. The influence of the central library in this connection will be strengthened, because the catalogueing, one of the main tasks of a librarian, will be done mostly on this place.
On the other hand EDP gives the chance to survival to small size units since one of the major problems, the communication, is almost solved without any time- or space problems. For example, DIMDI in

Cologne (Köln) has done by itself a remarkable amount of searches up to 1977. Since there are now so many remote connections, this number has decreased. Decentralized information units with sometimes only one or two people are now the plans of searches. And it is to constitute that the ongoing spreading of terminals (home-computer, BTX-market) and the very simplified procedure to come in contact with the host, will make the end-user his own searcher.
Very often the chance of decentralization, however, will be prevented by the main aspect of the implementation of EDP, namely rationalization. Again, for example, the TU Berlin aims at reducing the departmental libraries. The information (books and catalogues)should not be offered in more, but in fewer places. What does that mean? There is the hope that the online-catalogueing needs less personnel for the title-enlistment; with online-catalogueing high-educated librarians are no longer necessary, who, in the past, had run the small department libraries as a spare-time work. Now, only some librarians at a central place are enough to implement the additional and, in the online-catalogue, missed books. And in the decentralized departments lower-paid employees will do the job as control- and lending-out personnel. The reduction of the number of this kind of employees is possible by concentrating the books in a few big departments.

3.4 Change of Professional Image

The above-said things indicate: the rigid change of the professional image of librarians and documentalists. The grwoing overlaping of the information transfer task, the tendencial devaluation of the librarians' duty through EDP, and the up-valuation of the documentalist in respect to his information-transfer,activities has led to the situation of competition: will the scientific librarian be the searcher of tomorrow, or, will the searcher be the coming leader of libraries?
In a seminar with both librarians and documentalists (I took part as a teamer), there was evaluated: EDP will decrease the need of the traditional tasks of a librarian down to estimated 60-90%. This is true especially for the non-scientific personnel, but also, with some small restrictions, for the scientific lecturers. And even the number of documentalists which use EDP already will decrease.
Finally we can conclude that EDP will effect the work of librarians very dramatically, not so much because of using EDP, but mainly because of the general and total charge of the sequence of organization.

4. Documentation of Hospital Care as an Example of EDP-Use

In order to show you some practical aspects, I want to tell you something about the daily work in our field of work.

4.1 Database HECLINET

The Hospital Care Documentation is operated in common by the Institute for Hospital Planning of the Technical University Berlin (IFK) and the German Hospital Institute, in cooperation with the University of Düsseldorf (DKI).
We are supported by the Library of the Technical University Berlin

and are financially protected by the Secretary of Youth, Family and Health in Bonn.
Our intention is to record the entire published literature of our special field, and to make it available as fast and as exactly as possible to the interested public.
There is no exact definition of the interdisciplinary area of "hospital care", and it is hardly possible since we have numerous overlaps with the adjoining discipline of medicine, but also with the social sciences, economics, architecture, engineering, civil engineering. Aided by internal guidelines the indexers try to filter out from the existing mass of publications all which is interesting and worth to be documented under the aspect of "hospital care".
Right from the beginning the Documentation Health Care has included literature in foreign languages. Due to efforts within the frame of the International Hospital Federation there were the first cooperation discussions in 1971 which have extended continuously and led to the federation "HECLINET". HECLINET is an acronym and derived from the term "Health Care Literature Information Network".
Following institutes are cooperating at present:
- Danish Hospital Institute, Copenhagen (DSI)
- Austrian Federal Institute for Public Health, Vienna (ÖBIG)
- Swiss Hospital Institute, Aarau (SKI)
- Swedish Planning and Rationalization Institute of the Health Service, Stockholm (SPRI)
- Medical Centre, Warsaw (CMW).

In order to fulfill the objective defined those journals and publications whose topics deal directly with the area of hospital care are included as thoroughly als possible. In addition, all those magazines are checked on a regular basis which frequently contain articles pertinent to this specialty; together with the other publications which are acquisitioned due to leads from bibliographies, advertisements, brochures etc. there are between 4.000 and 5.000 references per annum which are included in the data base (at beginning of 1983 approximately 55.00 documents). About 70% of these are taken from the over 400 journals which are scanned regularly and which are at the centre of attention.
Each document to be incorporated is analyzed according to formal and content criteria by using a form (acquisition form). Of the 11 categories one is used for adressing and numbering, four serve bibliographic purposes (author, title, place of publication, language) and six are used for describing the contents (category, descriptors, abstract, location information, addenda, architects). The central and most important step to the analysis is the descriptor assignment (category 61) for the contents representation by keyword chains and the retrieval later on. This is handled on two levels: one, the corresponding descriptors are taken (indexing) from the "Thesaurus Krankenhauswesen" acquired by the HECLINET group and two, they are logically concatenated based on the contents (indicating), i.e. related descriptors are concatenated to chains through the same indexing numbers.
The thesaurus is broken down into an alphabetic and a systematic

section and contains about 3.500 terms of which 2.500 are used for cross-referencing the allowed 1.000 descriptors

4.2 Cooperation and Coordination

It may truly be said that the philosophy underlying HECLINET is "co-operation"; it is based on the following consensus:
- Each institute analyzes its national literature according to jointly agreed upon rules and principles and makes it available to the partners.
- There is a defined centralized allocation of document numbers for all partners.
- The description of documents with keywords is based on the "Thesaurus Krankenhauswesen" (German language). Titles and abstracts may be written in German or English, other languages will have to be translated.

- Data acquisition and processing up to production and printing of the "Informationsdienst Krankenhauswesen" as well as generation of magnetic tapes for input into the computer is handled centrally in Berlin.
- The publication "Informationsdienst Krankenhauswesen" (Health Care Information Service) is produced and printed by phototypography with indexes in Berlin. It is issued each second month with references of the latest literature which has been published.
- Each institute receives the "Informationsdienst Krankenhauswesen" and one magnetic tape for input into the own EDP systems; the references may also be obtained printed out on file cards.
- The institutes choose their own EDP-retrieval-system; because of the technical compatability IFK, DKI and ÖBIG use GOLEM (Siemens), DSI and SKI use STAIRS (IBM).
- Journal articles and literature of up to 30 pages are microfilmed; each institute has a complete microfiche library with the result that more than 80% of the documents are available for reading and copying on a decentralized direct access basis.

This cooperation is supported by the following mechanisms of coordination:

- The rules and principles agreed upon are collected in the "HECLINET Manual", a loose-leaf collection which also contains the detailed work rules and agreement lists for documentary acquisition.
- The "Thesaurus Krankenhauswesen" is the binding regulation for keyword assignment, and thus it is revised and improved continuously (the 4th edition appeared in 1978, the 5th was issued in 1981).
- Twice a year there are meetings with analyst's test, discussion of terminology and definition of guidelines.

5. Is there an Obligation to use EDP?

Looking at the reality in order to answer this question, we can only say: "Yes, because everybody does it". But what is the reason, maybe not for everybody, but for many, to take over EDP for better or for worse?

5.1 Technological Development

The niveau to use EDP in the broadest sense is dramatically lowered. Some thoughts:
- The price of the hardware has fallen considerably;
- the market for home-computers, personal computers and so on, has a rapid increase;
- the audiovisual market of entertainment with programmable videos, remote controls, tele-games, and the market of calculators and watches have raised the acceptance of the modern technology.

The overall tendency to use EDP is supported by industry and commerce with the corresponding marketing funds. On the other hand, EDP is very fascinating and most people are unable to flee. In the contrary, they tolerate the disadvantages and overstresses, which are especially remarkable during the introduction time without claiming. I think that there exists a kind of psychological obligation; but obviously there exists a very concrete economic obligation too: very often the grant of money to buy new equipment in libraries is completed with the duty to implement EDP and rationalize with this tool. Another economic aspect is the fact that industry presents only equipment with as many electronic details as possible, so it is impossible to replace an older mechanical instrument, even one with the same technical standards. A repair is tremendously expensive, and so there is no other way than to buy the new technics.

5.2 Political Decisions and Programs

Use of EDP, in a very broad sense, needs political assistance. In most countries the information transfer bureaux are depending on governmental money and the communication networks like telephone or telex are owned by the government. Let's not discuss here what the government is, what kind of people make decisions, and who has the strongest influence on money distribution. Let's talk about government in a very general way. It has, and will further, support the implementation of EDP. Take the US as an example: The worldwide best-known firms "Dialog" and "SDC" got enormous amounts of money from the defence budget. The establishment of these firms in the I&D market was like a by-product of the war industry. Or: The US president has the right to call for so called "White House Conferences", if he thinks, that questions which are very important for the US should be discussed. In 1979 a conference took place with the special topic "library and information handling". The resolutions of the conferences initiate concrete financial decisions by Congress and president. In 1979 one of the resolutions recommended the further consolidation of EDP-based online connected systems.
An example of the Federal Republic of Germany: In 1974 the federal government started the big so-called I&D-program, provided with good financial ressources. The government took the initiative to coordinate the many small and smallest I&D-activities and intended to establish a common financial support-system as well as a common EDP-system.
Another example: The German Library Institute, located here in Berlin, is promoting a project this year entitled "rationalization of oper-

ating sequences in middle and small size public libraries with the help of techniques".
An example of the European Community: DIANE-EURONET was developed as EC-project in order to enable general and easy admission to the different national hosts and the possibility to switch between them very cheaply.
And finally: The ADONIS project was initiated by six big publishers in Germany, with the aim of introducing the digital dise as full text storage of all journals. Since this project shows to be too big for these publishers (like Springer, Elsevier, Pergamon) it will probably be continued by EC.
We can state that there exists a more or less clear obligation in the political sphere to use EDP.

5.3 Task Performance of a Small Size Information Bureau

The small and smallest libraries and documentation departments of scientific units or firms should support the research work as good and as fast as possible. Since the price-policy of many publishers of printed information has risen to a much too high level, very often the only way to find literature hints is by EDP-search. On the other hand the research-worker is expecting the complete and concise quotations, especially when starting a project, which, of course, is quite legitimate. Without EDP and the many different kinds of data bases this is almost not possible.
Besides these two points there is another trend with EDP, namely the image and confidence of customers in the quality of the search work. In some cases of our daily work we have learned that some customers, generally sceptical about the information service of the transfer department, can be satisfied with the magic word EDP.

6. Future of Small Size Information Bureaux: Because or Despite EDP

Perhaps we can finally define as a resumee: library and documentation departments have to integrate EDP-search as a tool in order to fulfill the tasks of information transfer. They can, in a positive way, use the possibilities of EDP as an argument to establish small, lucid units which are close to the customer.
On the other side there exists a danger: If EDP will not be simply a search tool, but rather an initial starting point for reorganizing the operational sequence, nationalization and centralization will come and threaten the small units.
In the developed countries, but much more in the Third World, the basic condition of a useful EDP activity in the I&D field is a good functioning telecommunication network.
The main use of EDP, the rationalization, makes the value of EDP very doubtful, and I think that the rationalization effect is directly in contrast to the aims of a good development policy, directed at a step-by-step education or help to self-help.

2.2 Discussion on "Low Cost Documentation"

The main topics of the discussion following the lecture "Low Cost Documentation" (for the text of the lecture, see 2.2.1) were:

- Additional information by A. How on the OASIS-system (based on computer logic, faster if computerized), and the feasibility-study by G. Rodriguez. It was mentioned that the system had a 3.000 keyword-capacity, and that retrieval was possible in respect to subjects, concepts and country-keywords; there are experiments with another software-package; the inputting into the computer is done by the WORDSTAR software-program, the retrieval is done by SUPERFILE. (IDOC payed about $ 25.000,-- including two software-programs, three terminals, and one printer.)
- For speeding up the sorting process, micro- or mini-computers are necessary.
- The storage-capacity of mini- and micro-computers.
- The dependance of the MINISIS program on HEWLETT PACKARD hardware and the attempt of IDRC to make the system independent of that firm.
- The problem to foresee how complicated the future user-questions will be.
- Political and administrative pressure to use national or international hardware.
- Guidelines on how to use EDP exist (IDOC), but it depends on the needs of each individual institute.
- Other examples of such guidelines were quoted (e.g. in the U.K. a group of six NGOs published one), but it was generally felt that EADI should work out an inventory of which EDP is existing today, including the experience of the United Nations organizations.
- Referring to the question of costs, it was pointed out that "low cost" is a very relative notion; what costs more or what costs less (manual work or computerization from the very beginning) depends on the capacities of each institute (and, maybe, in a few years micro-computers and software are in any case cheaper than manual work). Several examples were given (Lubljana, Kiel), showing that institutions are carrying out experiments by using manual

and computerized systems at the same time for reasons of comparison, and will see after the experiment what is actually cheaper for their concrete purposes.

- Another problem discussed was that of the quality of the data-banks. It was felt that the quality of the available material exists as a question before the use of EDP, and that in many cases input-quality is very low. Therefore, critical reviews of the material offered will be necessary in the future.

- Coming back to the question of the changing role of the librarian, it was noted, that both librarians and documentalists should know something about the subjects they are dealing with, and that the librarian should get acquainted with the work of the documentalist and be able to perform it as well.

2.2.1

LOW-COST DOCUMENTATION

(M. Klatter)

The establishment of international information systems requires considerable amounts of time and money. The question is whether many documentation centres here (in Europe) and in LDCs can afford and/or want this form of cooperation/networks.

Computerized information technology is not always easily available to small information centres, both in the industrialized and in the Third World countries. Even if it is true that computerized data bases are becoming available to even relatively modest information centres and micro-computers are becoming cheaper every year, many small or medium-size documentation centres simply do not have the resources at the moment to participate in the information systems. There are the problems of high costs, expensive equipment, maintenance, skilled labour, foreign control and technological dependence. It is very doubtful whether the international information systems actually lead to greater equality of access to information.
It is not a question of electronic versus manual systems - it is more a question of whether there is a way in between traditional and completely computerized systems. The point is whether there are strategies which small centres can adopt, making them less information-dependent without losing access to information.

Some examples of information systems using technologies which are "computer compatible", but not "computer dependent", are:

IDOC, Rome
using a manual system incorporating the logic of computers: the OASIS system (Open Access Symbiotic Information Sharing).

CORNELL UNIVERSITY, Ithaca
For the "Program on Participation and Labor-managed Systems" Center for International Studies at Cornell, a documentation system comparable to the OASIS system has been developed.

TOOL, Amsterdam
TOOL is a network of organisations involved in appropriate technology. Their system, called SATIS (Socially Appropriate Technology Information System) is essentially an inforamtion exchange system using conventional documentation techniques, but adapted to its specific purpose.
TOOL has now built an international information network of some 65 AT organizations, allowing for local control and realization of the needs of each centre. SATIS is designed to make unpublished AT-information available in addition to more regularly published information.

The principles used in these low-cost documentation systems are quite similar to electronic data-processing. These systems are based on computer logic, but the operations for classification and retrieval are manual (mostly using optical punchcard-systems). A cheap technical equipment is combined with a speedy retrieval process, offering the possibility of immediate visual perception of all the information stored in the system on the subject in question. The operation is simply manual, using a punch (for recording) and optical, superimposing the cards against a source of light, so that light will shine through the common holes punched in the cards. No electronic processing is necessary; yet the system is easily interfaced with computerized systems and could therefore play a role in an international exchange of information with realistic possibilities for small documentation & information centres to fully participate at low cost.

Advantages of these systems:

- Cheap (relatively)
- flexible (new concepts can be added at any moment, enabling the system to follow closely new developments in the subject field)
- accessible at any moment
- little training is required
- selection of material under one's own control (allowing the input of own/unpublished, "grey", material).

For small centres which have no (not yet) accession to computerized systems, these low-cost systems can greatly improve the retrievability of stored information.

The purpose of this lecture is to draw attention to manual systems using the same binary logic as electronic systems, which can be easily converted into computerized systems or facilitate the transition to an eventual computerization (TRANSITION TECHNOLOGY), acknowledging advances in electronic data processing, but at the same

time acknowledging the fact that these technologies are not yet available for many small centres at the moment.
The decision to use a manual or an electronic system depends on the concrete situation of a particular centre: quantity of information, needs of the users, financial resources, manpower, etc.
The choice might not so much be one particular type, but a combination of different technologies (advanced and conventional).
As a documentation collection grows there is a tendency to resort to electronic systems. This is exactly what IDOC is doing at the moment. IDOC undertook a feasibility study (published) on the computerization of documentation for small document centres, analyzing the drawbacks and benefits of the transition from manual to electronic systems. IDOC is now using a microcomputer. The OASIS system is still appropriate to this: practical application of the binary logic of computers for manual as well as computerized systems. The focus is now on the transition from manual to electronic systems.

In chosing a computer, the compatibility with computers used by other information centres/international information systems is a very important element, which counts for the software as well.
At the moment, UNESCO, in cooperation with UNIBID (International Centre for Bibliographic Descriptions of UNISIST) is developing a suitable software-package for use in micro-computers (referred to as the "IV + V System"). The fact that existing software systems (e.g. MINISIS) are not protable is the reason why UNESCO/UNISIST is developing a portable software-package. This package is intended to be compatible with the existing software, including MINISIS-software. There is a cooperative venture between UNESCO/UNIBID and the Institut für maschinelle Dokumentation in Graz, Austria, which is developing the software at the moment. The completion is anticipated by 1984. It has been evaluated by an international team of experts, who concluded that the software is well designed, portable among a wide range of micro-computers as well as many mini-computers and applicable to a wide range of bibliographic and other applications. Initially, the emphasis is on the development of software for use on microcomputers because this seems to be the more relevant application for smaller documentation and information centres, especially in LDCs.
Taking into account the limitation of micro-computers, installing the software in larger machines and compatibility between micro-computers and larger machines will also be given attention.
In researching the various computerized systems suitable to small and medium-size documentation centres the compatibility with the UNESCO software-package should be taken into account!

2.3 Discussion on Thesaurus

Discussion on thesaurus problems occured after the lecture "The Subject Approach to Information: The Role and Use of Thesauri" (for the text of the lecture see 2.3.1), and referred to the following topics:

- The relation between OECD Macro-Th. and Special Thesauri (and the lack of time to produce a Special Thesaurus oneself). The solution proposed: Ask international organizations which collect Thesauri internationally, or add free terms to the Thesauri-descriptors.
- The problem of pre- and post-coordination (in the case of post-coordination the user has to pay, so the intellectual part of the information has to be done before; free-text search is expensive for the user).
- Generally, the Thesaurus reduces the costs of search in big systems, but in smaller systems this may not be true, so one has to use simpler methods.
- In regard to the updating of the OECD Thesaurus (the last updating was done in 1977/78) it was pointed out that a new updating was a political decision.
The Conference felt the need to ask for the continuation of updating and argues for a recommendation in coordination with regional associations!
- The problem was discussed which Thesauri are being used. As an example, UNIDO took the 1970 Macro-Thesaurus and extracted what was needed and completed it for its own purposes. It was pointed out that Poland had an information-centre on Thesauri for all non-English languages. Furthermore, there are examples of institutions examining Macro-Thesauri and Draft-Thesauri to see how they work. The experiences known are promising. A further hint was given referring to the United Nations Documentation Centre which published a Thesaurus on Development Terms in 1982, and to the HABITAT-Thesaurus that will be published multilingual.
- The question was raised whether or not bibliographical control can start among EADI-membership. It was recommended that the EADI I&I Working Group should integrate more with the other EADI-Working-Groups, e.g. by the EADI-Bulletin, and that this project should be on the

agenda for the Madrid conference.
- Another question dealt with the inaccessability to government-information in developing countries (reports by governments are confidential up to 80 or 90 percent). It represents a big problem for documentation in the developing countries. But this does not only occur in developing countries. Whenever know-how is combined with strong capital interests and investments, it will be classified. Often national libraries preserve confidentiality, too.
- Besides classified information, the exchange of documents with developing countries is difficult due to narrow photocopy-capacities, exchange-currency problems, and communication difficulties. As a general experience it was stated that cooperative methods make the exchange of informations and documents work ('give us what you produce, and you will get all that comes in').

2.3.1

THE SUBJECT APPROACH TO INFORMATION: THE ROLE AND USE OF THESAURI. AN INTRODUCTION TO SOME BASIC CONCEPTS.

(R. Supper)

As librarians or information specialists you will have two kinds of readers or users:

- those who come to the library knowing what documents they require and who are interested only in the fact, whether or not you can supply them, and
- those who come seeking information and need some kind of assistance to find it. This means that they look for documents which will, or may, contain the information they seek.

It is with the second type of reader/user that I am concerned with.

To this end, that is to supply information to our users and to reduce their uncertainty, we have to analyze as well the contents of our documents to answer the questions of our users.
It is not simple to perform this subject analysis. If I come face to face with a striped animal in the jungle I don't have much difficulty in saying "This is a tiger", but books on tigers are not striped and they don't growl or spring at us. They consist of seve-

ral thousand words between two covers with a title that may or may not include the word "tiger".
Subject analysis consists in reducing these thousands of words to a very precise statement of the subject scope of a book.
If you use a subject catalogue, a bibliography, or even a retrieval-system inside a computer, you have to translate your ideas and concepts (or the readers' demands) into the language of the "system", i.e., normally into words, into the words of an indexing language.
The words of the question must be matched with those that have been used for the description of the documents, the same language must be used for both: questions and descriptions.
This means that ordinary, common natural language is not quite the tool we need; we need a subset (a part) of natural language: the indexing language or at least a controlled vocabulary or a classification.
Definition of the indexing language:
"A controlled set of terms selected from natural language and used to represent, in summary form, the subjects of documents". (ISO/DIS)

What is the difference between
- a classification, e.g. the Universal Decimal Classification (UDC) and
- an indexing language using words of the natural language?

Classification Scheme

In a normal classification scheme there is just one most appropriate place for a document, e.g. one place on the shelf or one catalogue-card or one citation in a bibliography. The classes are mutually exclusive. This is as if you have to put each document into just one drawer of a cabinet.
All data referring to one item are on one data-carrier (e.g. a catalogue-card) in one certain filing order.
It was only through the advent of technical equipment like punched cards that different filing rules became possible.

Indexing Languages using words of the natural language, that is:
- Subject headings
- thesauri.
One book can be taken down on several "cards". One concept, one idea can and may be expressed by one to several descriptors.

Thesauri and classification schemes use different filing rules:
- Thesauri use the alphabet that is known to most of us (at least within one language - problems arise for multilingual thesauri);
- classifications have to be filed according to numbers, symbols, punctuation marks, etc.
This means:
A classification scheme uses a logic which tries to reflect the order of the universe, the logic system of a specific science or another conceptual system;
a thesaurus or a list of subject headings uses the formal order of the alphabet as primary means of access. E.g., "baby", "child" and "mother" are seperated.

Let us concentrate on systems that use the natural language, that is,on the indexing language in the narrower sense.
What are the words of this language?
One might simply extract words from the titles of the documents (the catch words) to indicate the meaning of these documents. This is quite often not useful. So, one has to use words that summarize the concepts of the documents as shortly and precisely as possible. In normal library routines, when three or four words are written on top of a catalogue-card (in pre.coordinated systems) these words are named subject headings, in post-coordinated systems where these words are linked together later during the search, these are called key-words. Inside a thesaurus one normally distinguishes between words that may be used for indexing, the "preferred terms" or "descriptors" and the "non-preferred terms" from which the user gets referred to the preferred terms.
At this moment, this distinction of the terms will and must not bother us. But we will have to have a close look at the difference between pre-coordinate systems and post-coordinate systems.
The pre-coordinate systems are those used on library catalogue-cards. The "pre" refers to the time of entry, of recording into the system. Information-retrieval systems, whether by punched cards, by peek-a-boo-cards of by computers, often use post-coordinate entry of terms, that is to say that they often use these rather simple, seperated terms without displaying the relations that exist between these terms.

For example (pre-coordinated entry):

Houses - floors - timber
Houses - floors - log - timber
Houses - walls - surface - timber
Houses - roofs - timber

The two words "houses" and "timber" are separated, these four entries are filed at different places.

In contrast to that, compare the post-coordinate system.
Advantage of post-coordinated systems:
- Any combination of terms is possible, even combinations that so far did not appear in literature.
A search for "houses" and "timber" in our example will lead to an immediate result.

Finally, we come to the main subject of this lecture: Why bother to use a thesaurus, a special type of indexing language, when it seems so much easier to use simple words or terms instead of those terms that belong to a controlled vocabulary?
Experience teaches that one has to use a controlled indexing language, preferably a thesaurus, or at least a list of permitted, agreed-upon key-words. If you don't do that you will soon be buried in a large number of words that you have used only once or twice for indexing, and which you might never use or even think of for retrieval. You might quite easily end up with as many terms as you have documents in your collection.
That means: If you use the simple way in the beginning, if you don't

use an indexing language from the start, you will have to pay for that later by a more difficult and time-consuming search and presumably even by a loss of relevant documents.

Definition of the Thesaurus:
"A set of terms selected from natural language, and representing the vocabulary of a controlled indexing language, organized in such a way that the formal relationships between terms, for example as broader and narrower terms, are made explicit". (ISO/DIS)

It has the following features:
a) Terms are unequivocally (clearly) associated with concepts (terminological control), by
   - listing all synonyms
   - distinguishing
   - homonyms

fr.	engl.
TOUR (BÂTIMENT)	TOWERS
TOUR (OUTIL)	LATHES
TOUR (VOYAGE)	TOURS
TOUR (ROTATION)	ROTATION

and polysemes, for example: Government (activity)
Government (personnel).

A thesaurus is based on the language as it is used by the authors.

Structural Features of Thesauri:

1. Vocabulary control
1.1 Control of synonyms
The preferred term has to be used, there is a reference from the non-preferred term to the preferred one.

Example:

NETHERLANDS
UF: Holland
Holland USE NETHERLANDS.

ASSOCIATION FOOTBAL
UF: Soccer
Soccer USE ASSOCIATION FOOTBALL

There are thesauri in systems using computers that link synonyms together internally, using a common number for the same concept (meaning).

1.2 Control of homonyms
In a thesaurus the meaning of terms is made explicit. If one term might refer to different concepts, either qualifiers are added, or the term is allowed with one meaning only.
A qualifier forms part of the descriptor/preferred term.

Example:

CRANES (birds)
CRANES (lifting equipment)

1.3 Clarity of meaning
Descriptors should have a clear meaning and should always be used for the same concepts.
Words/terms represent concepts/ideas/meanings, and are often defined differently, but within one system they should always be used in one clear, precise meaning. To this end either definitions or scope-notes can be used. Unlike the qualifier, a scope-note does not form part of a descriptor, that is, it is not used in indexing.

Example:

MICROWAVE FREQUENCIES
SN 1GHz to 3000 GHz

2. Basic semantic relationships in a thesaurus
2.1 Equivolence relationships (see above for the treatment of synonyms)
2.2 Hierarchical relationship
There are broader and narrower terms.

Example:

AIRLINES
BT: TRANSPORT SERVICES

TRANSPORT SERVICES
NT: AIRLINES

One can distinguish especially between the generic and the partitive (whole-part) relationship.

2.3 Associative relationship / related terms

Example:
BOATS
RT: SHIPS
SHIPS
RT: BOATS

3. Reduction of the Number of Terms
Most thesauri recommend semantic factoring. If a (specific) concept is not found in the thesaurus, the user has to break it down into it's semantic components (not into the original simple and short words).

Example:

THERMOMETRERS could be expressed by a combination of three terms: TEMPERATURE + MEASUREMENT + INSTRUMENTS.

All these terms have to be used separately in indexing and retrieval.

Display of Terms and their Relationships
Normally there is a main part and an index that gives access to that part.
If the main part is in alphabetical order, the index has got to be arranged systematically; if the main part uses a systematic display, there has to be an alphabetical index.

It is better, if both parts have an equal status or if even more advanced and interlinked forms are used, as the THESAUROFACET.

The use of the "Macrothesaurus for Information Processing in the Field of Economic and Social Development" by OECD might be of great value for you.

How to Work/Index with a Thesaurus

Most of the literature on thesauri deals with the construction of thesauri. Unfortunately there is not much about indexing with a thesaurus.

Indexing consists of two stages:

1) Determining the relevant concepts and expressing them in words or sentences of the natural language;
2) translating the terms into the indexing language, especially into that of the thesaurus.

The article by H. Wellisch in JASIS (1972) p. 189-195 might be of some help.

The use or not-use of a thesaurus does not affect the use of syntactic means which may be used to display the relationships between the terms more clearly.
The most simple form of a grammar is the order of words, bringing related subjects together and writing "sentences" in a telegram-like style.
More advanced systems use e.g. different punctuation marks to express e.g. the role of "influence", or the relation between object and material or that between verb and object as in the following example:

Manufacturing: sheet metal: laser
(The use of lasers in the manufacturing of sheet metal.)

The most adavanced form, which is the easiest one to understand for users is the use of prepositions like "in", "on", "during", "by", etc. (as in the PRECIS system that is used by the British Library).

I do very strongly recommend to you to buy and to read the two standards that are relevant in this context:
- ISO/DP 2788 Guidelines for the establishment and development of mono-lingual thesauri.
- ISO/DIS 5968 Documentation-Guidelines for the establishment and development of multilingual thesauri.

Both contain a lot of information and both are quite easy to read and to understand. They can be receivend through your national standards institution.

ISO STANDARDS HANDBOOK 1
Information Transfer

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ISO 4-1972	Documentation — International code for the abbreviation of titles of periodicals	3
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ISO 18-1981	Short contents list of periodicals or other documents	19
ISO/R 30-1956	Bibliographical strip	21
ISO 214-1976	Documentation — Abstracts for publications and documentation	23
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ISO/R 843-1968	International system for the transliteration of Greek characters into Latin characters	97
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ISO 2014-1976 Writing of calendar dates in all-numeric form 518

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See also: ISO Standard and Recommendation July, 1983.

2.4 Reception by German Foundation for International Development (DSE)

On behalf of the Board of the German Foundation for International Development, Dr. Dieter Danckwortt, Head of the Education, Science and Documentation Centre, officially welcomed the participants of the EADI-Conference at Villa Borsig, in the evening of October 10.
Using that opportunity, Mr. Danckwortt gave a speech, including in it some noteworthy elements of the history of the building and the surroundings of Reiherwerder, the DSE Conference Centre. Among other things he pointed out:

"This island called 'Reiherwerder', which means home of the bird heron, once was the property of the Humboldt-family who built their castle in the neighbourhood. The two brothers Wilhelm and Alexander Humboldt were a symbol of scientific development, international research cooperation and educational reform in Germany at the time of Goethe, who also visited the village of Tegel once, had dinner at the restaurant 'Old Frederic' and listened to the owner's stories about ghosts in Tegel; this event later became part of 'Faust II'.
When industrialization began the owner of a firm that built locomotives, Ernst Borsig, became owner of the island in 1898. He built a smaller house first, and later in 1910 the big villa. But the Borsig factory was a victim of the industrial crisis after the first World War, and the island and the villa were sold in 1937 to the government and then used as an academy for the head officers of the administration of finances.
During the second World War it was an officers club of the Air Force and at the end of the war the house saw Russian soldiers, German refugees and for a while became the headquarters of General König, the Commander of the French troops in Germany. When he moved with his headquarters to Baden-Baden in West Germany, the German Federal Government decided to place the house at the disposal of the German Foundation to establish an international conference centre in 1960.
Since that time it is, together with the new building, the biggest centre of the Foundation and its seven departments which organize conferences and training courses in their respective fields all over the year.
Our Bonn department is happy to use the Villa Borsig for the bigger conferences because we think that Berlin is a much more interesting place compared to the small university-town of Bonn. Berlin is the biggest industrial, cul-

tural and scientific place in the whole of Germany, and as a divided town it is where you can study both communist and capitalist systems in one single place and compare them - a unique place in the world.
So use your time here to understand our present 'German situation'."

3. PROCEEDINGS OF OCTOBER 11, 1983

On October 11, 1983, various events took place during the EADI-Conference.

3.1 User Analysis and User Education (Discussion)

The main topics of the day were "User Analysis" and "User Education", dealt with in two lectures:
"User Education" by O. Nørgaard (see 3.1.1) and "User Analysis" by D. Steinert (see 3.1.2).
Discussing the lectures and, at the same time, exchanging experience, the participants deemed it necessary to concentrate on the following topics:
- How DSE serves the user group 'public administrators'.
- The limited amount of Third World research-work in country-reports. It was recommended to include as much material from developing countries in the national collections of material as possible - despite the language-problems existing.
- Training of students, and information of the lecturers in institutions (by telling the lecturers what their students are being told by the documentalist). In a more general way: Teachers must be told, and devices must be developped which do not offend them.
- How DSE serves the various user groups (i.e. staff: 90 persons; aid administration: 200 persons; general public: 10.000 persons). The question was raised whether the DSE system could be applied to less wealthy countries; the answer was that it might be applicable also to small libraries, if the priorities are clear).
- Another problem, in regard to DSE, was put up: Why does DSE, and others, work so much with 'digested' informa-

tion? Isn't it possible to transfer and use information of the developing countries? (Danger of 'de-developing'). Wouldn't it be better to make people more aware of first-hand literature? The questions raised have to do with the more general problem of how to develop the interest of people for development and other problems, that they do not know. What has to be done is: to train people how to ask questions!

- Furthermore, the approach to user groups was broadly discussed. Proposed means are, inter alia:
Invite people working on dissertations to the document centres and give them lectures - verbal approach is better than written prospecti - visiting conferences and explaining to the participants the use of document-centres - invitation of multipliers that are able to do user training - importance of practical exercises - fixing dates for user training - librarians must visit the first school-classes (Yugoslavian example).
- It was recommended to EADI to establish a catalogue of institutes, active in development-studies!
- In regard to other user-groups, like business-men and the mass-media, the experience of the participants was that these groups refer to their own traditional systems.

3.1.1

USER EDUCATION

(O. Nørgaard)

After having displayed his personal background (trained as a public librarian, volunteer in Tanzania, travelling India for half a year, he slowly became a research-librarian at the Centre for Development Research in the course of twelve years), Mr. Nørgaard put up his central demand, being at the same time the guide-line for his lecture: User Education should be an integrated part in university studies!

The history of development studies, Mr. Nørgaard pointed out, can be characterized als follows:
- Before 1960, research on developing countries was done

by anthropologists, and hardly by any other discipline;
- when the majority of the former colonies won independence, all disciplines entered the study field, and all made their contributions; this led to an "explosion" of written material
- After 1970, development studies entered higher education; all scientific didsciplines now offered development studies as part of their curriculum. This, again, led to a second explosion of (un)published information.

Concerning the contents of the literature, in the 1960s the general tendency was to look at developing countries as if they had to copy the industrialized countries' development. Only in the 1970s this attitude changed, accompanied by a change in scientific topics and increasing complexity in Third-World problems. At the same time, the number of students, of course, increased, and the output of materiall too.

The teaching of development studies, Mr. Nørgaard continued, was characterized by a corresponding change of the environment: during the "explosions", described above, the number of students grew dramatically, there was an increase in material and an increase in complexity. Accordingly, the "library world" changed: bigger libraries were built, more books were stored, more journals acquired, more bibliographical tools had to be established in order to fulfill the more specialized demands of the users. But the change in environment did not bring about a change in user education. The professor lectured ex cathedra, and people listended in silence; no-one ever talked about literature, about information-retrieval, etc. The next generation of teachers, trained by those professors, never felt a need to pass on their knowledge about methods and tools to the next generation. User education was generally agreed to be a necessity, but was regarded as a "border area" with no formal regulations, promotions etc. But: User education should be made an integrate part of university studies!

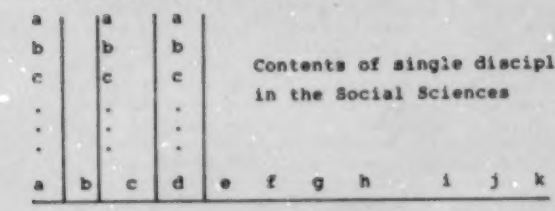
But how should this work?

User education has to start from the fact, that there has to be a linking between the demand of the user on the one hand, and the available material of information on the other hand to satisfy his needs. The aim should be: to get and establish as many links as possible! User education must, inter alia, consist of informing about the background-material, of teaching a good search-methodology, so that the student/researcher is able to search the relevant informations by himself. This teaching must be applicable for geographers as well as anthropologists, economists, and other disciplines.

But there should be three major conditions for user-education:
- the teaching-material must exist in written form;

- there must be a verbal training;
- the teaching must be combined with practical exercises.

Concerning the contents of user education, Mr. Nørgaard proposes boxes of teaching material. A simplified structure could look like this:



("a" in the line below would e.g. mean "Guides to the Literature", "b" means "reference books", "c" means "research register", and so on.)

This could lead to a long-term investment in education and would secure better educated people.
The teaching material of information retrieval in development studies should have two levels: a) General, b) specialized. The general material has to be the guide and satisfies the major part of the boxes mentioned above. It talks about the totality of the annual increase in available information. It breaks the "literature iceberg". It expains how informations are being produced. It describes and categorizes a major selection of serial bibliographies, representative of what the user needs to identify those 100.000 documents, i.e. the totality. Any reader's demand, irrespective of suject or country, can be identified.with such a system. Mr. Nørgaard stressed: "It is important to know, a) the system reports of the availability of literature, but also of items which my own library does not stock, but I believe that this is all right, because the departure for good service cannot be what a small library like mine stocks. And, once you know what a reader wants, you can very often help him by making reference to other libraries in your national library set-up."
The specialized material for teaching forms the other platform of the teaching-material.

By using such a type of manual, students are able to gecome their own best finders. And, above all, it is an attempt to rationalize research efforts.

3.1.2

USER ANALYSIS - THE EXPERIENCE OF DSE

(D. Steinert)

Users are rarely involved in the initial planning and design of information systems. These are usually startet by documentalists, librarians and other information specialists.
The whole purpose of an information unit is to supply information to those people who are entitled to have it. The unit therefore has to ensure that the services supplied match the need of the users. It has to be a direct and integral part of a special subject field and a partner in the solution of scientific, administrative and practical tasks. Information services are no end in themselves. They shouldn't be rendered to users according to the motto "sink or swim" or Hobson's choice: a choice of what is offered or nothing. They can only be effective if they are designed in correspondence and in accordance to actual and potential user needs.
There must be a continuous interaction with the users so that changes in needs can be ascertained as early as possible.
According to a research report published by the project group "Rentability of Information and Documentation", Heidelberg, in 1979 only 55 out of 121 German Information centres observed are practising some sort of user analysis.
Barriers are: costs, lack of personnel, the fear that discontent of users might induce sponsors to demand financial and personnel consequences, the fear of substantial claims on the side of the users, and - last but not least - helplessness as far as the use of modern sociological research methods is concerned.
Planners of information systems strive to anticipate user neeeds to the greatest extent possible. This might be inevitable when a system is to be designed. But as soon as it exists it is necessary to investigate whether the services provided really match the users' needs and their information habits.

Outline User Analysis

The information gained of user analysis is highly important for an information centre especially when it has to convince sponsors of value and effects of its services.
An essential precondition for user analysis is the correct identification of user groups according to some major characteristics.
First of all, there is the level of the user which might be a good indicator of the level of his needs.
Sencondly, aspects of specialization of the user have to be identified.
A third criterium is the identification of his needs. In this connection it has to be distinguished between the information interest of the user - i.e. what he wants to know - and his real information needs, between his current awareness and his ad-hoc needs.
A fourth and very important problem of user analysis is the information behaviour of users: which sources are they using for which purposes.

As far as users already known to the information providers are concerned, the question must be put in a different way. He has to be asked whether the services already provided are meeting his needs or whether services intended will meet his needs.

The methodology of user analysis in information and documentation is still in an early stage of development, although plenty of experience has been gained during the last years. Methods of measuring user needs are:

- Interviews (they can be open or structured, with or without questionnaires);
- questionnaires (asking users to fill them in);
- panels (these are inquiries repeated from time to time with the same user group to find out whether there are temporal changes in attitudes or needs);
- statistics or diaries (to measure user frequency);
- observation (through job analysis);
- analysis (of user requests);
- systems analysis;
- analysis, observation, experiments, and psychological tests to measure the influence and effects of information activities.

The method to be chosen for user analysis depends on the kind of investigation undertaken, on the services offered and on the structure of the user group.
Information centres who want to start user investigations have to decide which method or technique fits best for their individual purposes.
A combination of methods is often appropriate to make use of their different strength, the advantage of one method making up for the disadvantage of anotner; using one method in conjunction with another can lead to more comprehensive results.

In the papers distributed to you, you can find a reference to UNISIST Guidelines on studies of information users. This manual contains very valuable and detailed information how to organize user analysis, which method to choose and how to construct questionnaires.

USER ANALYSIS AS PRACTISED BY DSE

Scope and Information Services

Before discussing ways and means how DSE is handling the problem of user analysis, I should like to describe the scope of material collections forming the basis of DSE's information services.
The main subject fields we deal with are as follows:

-Development policy of the Federal Republic of Germany, other industrialized countries, and international organizations.
-Development theories, strategies, development planning.
-Development problems of Third World countries.

DSE provides the following information services:

-Retrospective searches for literature, research, institutions, conferences and courses;
-a Literature Reference Service based on individual user profiles;

-compilations of general information material to be used in development education;
-compilation of selected information on individual countries for German development experts.

Besides that periodical publications are issued:

-Lists of acquisitions, bibliographies on special subjects, on German Development Research, directories of German institutions active in the field of development policy and a calendar of events.
-During the last months state-of-the-art-reports have been started as a new service.

Users of DSE Documentation Centre

The documentation centre of DSE was established at the request of the German Federal Ministry for Economic Cooperation some twenty years ago in order to provide information on development policy, to coordinate information in this field and to play an active role in development education.
According to this mandate DSE serves particularly the following user groups:
Administrators, politicians, planners and experts in development aid institutions, scientists and researchers, students, pupils and journalists.

The Interview / Analysis of the Information Needs of Administrators

Most of DSE's efforts to analyze user needs have been concentrated on the user group of administrators, i.e. government officers in the ministries concerned with German development policy.
The method chosen for this group is the open interview. During the last ten years seven inquiries were made by DSE in the Federal Ministry fo Economic Cooperation.
Similar inquiries were carried out in several other ministries, the German Society for Technical Cooperation, the various DSE centres and several other development agencies.
In this paper I should like to concentrate on the inquiries in the Development Ministry because the talks with the users in other ministries or agencies achieved nearly the same results.

On the average, 40 heads of divisions, sub-divisions, and sections of the ministry were interviewed during each inquiry.
They werde asked questions about
-tasks and activities of their respective unit;
-information sources available and information needs;
-evaluation of the information services offered to them by DSE.

The reaction to the interviews were positive without exception. The interviewees proved to be open-minded, interested and information-minded.

Information Sources of Administrators

Besides the direct in-house communication this group mainly uses written information from own sources. These are primarily records, dossiers, correspondence, documents, files, reports. For units con-

cerned with regional aspects of development policy, for instance, the reports of the German diplomatic missions abroad are of great importance.
For them as well as for those units dealing with sectoral and intersectoral aspects the most relevant sources are publications of the World Bank, the UN and her Specialized Agencies, and other international or supra-national agencies. Some units concerned with cooperation with international agencies are in an autarcical position. They might be regarded as information suppliers for other sections in the ministry.
Information needs for project information and statistical data are met by internal other governmental and semi-governmental sources or by developing countries (via development plans, sectoral plans, budgets etc.).

Evaluation of DSE-Services

DSE-information services are highly appreciated in those sections having broader and more general interests. This applies to units dealing with concepts, planning and research in development policy, and administrators who are personally involved in development education.
Users dealing with regional or sectoral development are mainly self-suppliers.
At the most, information provided by DSE can be regarded as supplementary in a positive sense. Administrators are not so very much interested in acquisition lists, bibliographies, retrospective searches, research data.
As far as these services are concerned there are exceptions:

1. They are used occasionally.
2. When there are re-organizations in the administration, the officers who take over a new position very often have a great information deficit. In order to make themselves familiar with the new subject, they intensively use all information services available.
   As soon as they have settled in their new jobs and after having developed their own internal and external information channels, the communication with the documentation centre suddenly comes to an end.
   In most cases it revives after the next re-organization has taken place.

The most appreciated services of the DSE are country folders (a selection of newspaper clippings, country reports, statistical surveys for individual countries).
More than 50% of the users interviewed judged the literature reference service based on an individual user profile from valuable to very valuable.
The majority of users interviewed is interested in analyzed, digested, summarized, reviewed, condensed and evaluated information.
The preparation of such services can be very time-consuming. Requests for them can often only be met by taking off other activities, and a decision will therefore have to be made as to which is the most important.

DSE has made a first small step to overcome this deficit by introducing state-of-the-art-reports as a new information service.
Typical comments of the users were:
-We don't have enough time to read.
-We are understaffed.
-We are swamped by a flood of information.
-We are overburdened with work.

Advantages and Disadvantages of Interviews

DSE is going to continue this type of user analysis also in the future. The benefit of repeated interviews with the same user group lies in the fact that users are reminded of possibilities and limitations of information services offered, and they get to know how to have immediate access to a member of the information staff.

The method of asking users directly has the following additional advantages:
It is flexible, has high response, explanation and exploration are possible. It also includes some kind of user training because the multiplicity of services is demonstrated and the complexity of systems are explained to the user. But it also has disadvantages: It is time-consuming, costly, sometimes users do not know what they want, do not express what they feel, or try to tell the analyst what they think the analyst would like to hear from them.

Questioning

Another method DSE uses for measuring the efficiency of its services is the technique of questioning.
Pupils, teachers, students supplied with information material on the various aspects of development and on developing countries on request are asked in a sample survey to judge the relevance of material received and to propose improvements of this service.
Surveys like this are carried out every two or three years in September - the month of the highest rate of requests received by DSE for information material.
The survey started last September has not been analyzed yet. Since we are expecting similar results as in 1980, I should like to give you some figures of this inquiry:

659 questionnaires were sent to users.
151 reacted. For a survey like this, 23% replies is a considerable reaction.
90 considered the material as very valuable.
49 regarded it as valuable.
12 said it was of some value.
Nobody considered it to be of no value at all.

Highly appreciated by the users were the quality of the information provided and the fast reply.

Critical comments like "We need more information on development projects, more introductory literature on the problems of the North-South relations" were taken seriously by DSE, and additional information material has been introduced.

The great demand for audio-visual material cannot be satisfied by DSE due to financial and personnel reasons, but information sheets have been introduced telling the users where and how to obtain this kind of material.

Other methods used by DSE to identify user needs are:

Expert Meetings and Conferences

The DSE Documentation Centre serves as a platform for discussions of working groups of German institutions concerned with development information on agriculture, public health, transfer of technology, law in developing countries, area information and other subject fields, and organizes expert meetings on their behalf.
In these expert meetings information users from the development administration and other development agencies meet producers of information from libraries, information centres and scientific institutes in order to discuss problems of demand and supply and ways and means of improving information services.

Observation

Another approach to identify user needs used by DSE is the method of observing user needs.
Means are:

1. Updating of user profiles for a literature reference service in regular intervals. At present, DSE serves 100 individual subscribers in public, private and denominational development institutions and a number of scientific institutes.
2. Self-completion questionnaires for printed information that mainly serve for adjusting mailing lists.
3. More than 20.000 requests forwarded to DSE per year are giving it an excellent opportunity to bring acquisition and services into line with user needs.

* * *

The intention of this paper was to outline the importance of user analysis for the future information services and to demonstrate some ways and means of solving the problems. Nobody can offer recipes, but I think that the approach DSE has chosen can be recommended because the intensive interaction with our most important user groups achieved instructive results, improved the communication and helped to adjust information services to user needs.

References to Literature used:

Wersig, Gernot; Windel, Gunther; Plagemann, Susanne
Benutzerforschung im Aufbruch . Stand und Perspektiven von Theorie und Methodik der Benutzerforschung in Information und Documentation.
Karlsruhe 1982.

Laislepen, Klaus; Lutterbeck, Ernst; Meyer-Uhlenried, Karl-Heinrich
Grundlagen der praktischen Information und Dokumentation. Eine Einführung
München, New York, London, Paris 1980

Schäuble, Ingegerd; Wöhr, Malte
Formate für die Benutzerrückmeldung in IuD
Heidelberg 1980

Ford, Geoffry (Hrsg.); Harris, Colin (Hrsg.)
UNISIST Guidelines on Studies of Information Users (Pilot Version)
Paris 1981.

3.2 Visit to "Deutsches Bibliotheks-Institut" (DBI)

All participants spent one half day to visit the "Deutsches Bibliotheks-Institut" (German Library Institute) with its various facilities.
The duties of this institute being to provide supraregional services for libraries and carrying out research and development in the field of librarianship, the participants learned, by practical demonstration,
a) about the work on the machine-readable catalogue data which is available in German libraries to form a union catalogue, listing holding libraries and call numbers. Presently it contains nearly four million titles from 15 libraries in 5 different data formats.
b) Following the institute's participation in the BTX field test in Berlin (the use of BTX = 'Bildschirmtext' was demonstrated to the participants) considerations are being made to extend BTX offerings supraregionally to libraries and their users.
The participants learned about the studies how to introduce "Bildschirmtext" into libraries.

3.3 Film Presentation (History of Berlin)

In the evening, the participants saw the projection of a movie-film on the history of Berlin 1938 - 1970.

Dr. D. Danckwortt referred to the EADI-Working-Group meeting in 1982 about Area-Orientation-Information (see report) and the need to prepare special informations for the study of development in industrial countries for par-

ticipants in seminars and courses from developing countries, in order to understand the background of the solutions of development problems in these host-countries, mainly

- the geographical conditions (e.g. the middle-position of Germany in Europe between East and West, North and South);
- the political conditions (short periods of democracy, crisis of early capitalism, etc.);
- the cultural conditions (influence of the Christian churches, history of federalism, etc.).

The speaker mentioned also the didactic approaches in the international courses of the German Foundation for International Development to introduce the foreign participants to their host country without indoctrinating them, and the material on the host country which the documentation centre has selected (written and audio-visual).

Then the film was shown.

Due to the late hour, and due to the many emotions, discussions did not take place right after, but questions concerning the history of Berlin were dealt with during the guided city-tour and on several other occasions.

4. PROCEEDINGS OF OCTOBER 12, 1983

4.1 Discussion on International Information Systems

The lecture "International Information Systems" by R.T. de Mautort (see 4.1.1) was followed by a discussion on the topic of the discourse, and by the exchange of experience in this field of work:

- One important question handled the reception of DEVSIS by the developing countries. It was pointed out to the problem that developing countries are competing in development, that the traditional north-south-flow of infor-

mation has still its impact on the situation, and that the south-south-flow of information does not yet come out seriously. But, it was argued, that the technical co-operation among developing countries slowly comes into being, which gives an opportunity to build national subject bibliographies.

- Another question was why DEVSIS did not follow the example of AGRIS. Here, it was said, that AGRIS refers to strong national structures (concerning the ministries of agriculture), that there has been the political will in many countries to participate in AGRIS, while in the field of DEVSIS (i.e. development in general) power terms are coupled with political decisions; the development-assistance authorities are not the senior member of governments and are not liable to establish cooperation systems; the money-question, too, plays a considerable role as far as the acceptance of DEVSIS is concerned.

- Critical opinions on DEVSIS, pronounced by several participants (especially from Germany and Denmark) in respect to the high costs of the system, in respect to additional work and to language-problems, and in respect to a low request on behalf of users, were answered by participants from developing countries, arguing that one should not "kill" the general aspects of international cooperative information-systems despite their defficiencies. They should rather be improved in a creative way to enable developing countries to participate in international communication systems.

- The proposal was made to ask IDRC to prepare a short paper about the next political decisions and administrative steps in promoting DEVSIS in Europe for the Madrid EADI-Conference.

- Concerning the question on the perspectives of centres which use low-cost technical systems in respect to DEVSIS it was proposed that print-out editions should be reques-

ted by the developing countries present at this conference (test-exercise on the initiative of the respective countries).

- Once again the problem of classified information was brought up; it was asked for the possibility how to share it with other countries if they do not have national networks.
- In regard to other systems than DEVSIS, M. Guignard pointed out that too many research institutes and many other different interests produce complete anarchy in this field; he explained to the participants the working of IBISCUS and how developing countries can get into that system, starting from the question what is of interest for the developing countries. The aim is to strengthen I & D Centres in developing countries by helping them to the documents.
- In the course of the discussion, several other examples were given (e.g. the German Appropriate Technology Exchange - GATE - as an example for the exchange of documents and deliverance of direct information; the activities of British National Catalogue Library; the exchange between social research institutes in the Federal Republic of Germany; how to get into INKA from abroad; joint effort by several information centres in Latin America to share costs; etc.).
- It was agreed upon the fact that a major problem exists in the use of already existing machinery for development purposes. The necessity was felt to establish ongoing mutual information-exchange in view of the situation that technical development of computers is very fast and, in some future, will enable the individual researcher to work at home, using his personal computer. The question left open was how much all this will cost the user.

4.1.1

INTERNATIONAL INFORMATION SYSTEMS (DEVSIS)

(R.T. de Mautort)

I must admit to a considerable amount of trepidation having been called upon to represent IDRC at this gathering of learned and experienced information specialists, and to talk about DEVSIS.
Having barely been with IDRC for more than a hectic week of moving from Vienna to Paris, and having hardly worried about DEVSIS since a meeting in Ottawa in 1974, where I represented UNIDO during a discussion of the very concept.
I must apologize on behalf of IDRC that they could not assure a representation of someone more central to ongoing DEVSIS developments.
Fortunately, some written material has been forthcoming. Whatever could be said on the current state of DEVSIS affairs is contained in a paper by Catherine Shearer, the DEVSIS project manager, that has been distributed to you.
Other relevant material is available (and I have written it all on a chart):

IDRC 156[e]
International Cooperative Information Systems
Proc. Seminar Vienna , July 1979

IDRC 065[e]
DEVSIS: Preliminary Design of an International Information System for the Development Sciences

IDRC TS 43[e]
International Socioeconomic Information Systems. An Evaluative Study of DEVSIS-Type Programs

ST/ECA/PADIS "EV/81.4
DEVINDEX AFRICA 1981

IDRC 180[e]
PROJECTS 1970-1981

PADIS/80/6/Rev.
PADIS. Pan African Documentation and Information System

IDRC TS 40[e]
Manual for Preparation of Records in Development Information Systems
Gisele Morin Labatut

Information Exchange in North-South Context
Cooperation rather than new Markets?
John E. Woolston

DEVSIS-Type Systesm and Activities
Catherine Shearer, DEVSIS Project Manager

Global African and Nigerian Efforts
to Develop Information Systems for Socio-
economic Development
Wilson Aiyepeku, Program Adviser

After these bibliographic references, I ask you to allow me to say a few words about IDRC, and I shall then also say something about myself and my credentials for being hired by IDRC in the first place after retirement from the UN, and for being heard by a group of such a librarian standing.

IDRC, in the words of the President, was created in 1970 by the Parliament of Canada in response to the realization that considerable developmental research was needed in the developing countries, if developing countries were to gain the competence to fix their own goals and to solve their own problems. The centre is, unlike any other organization; it continues to be funded entirely by the Parliament of Canada. Yet, it is not in any sense part of the Parliament of Canada. Its policies are set by a board of governors, composed of both Canadians and Non-Canadians; 10 of the 21 members are drawn from outside Canada, 6 of them from developing countries. And there is a member of that board in France, a professor of law, who is going to breach down my neck in Paris.
IDRC is distinct not only in what it is but also how it goes about its task. Its concern is not simply to offer research support to the developing countries, but to do so in ways that increase the competence of researchers in those countries. We do this by spending our funds in large measure to the developing regions themselves. But in Canada we finance research programs which, in most instances, are chosen by scientists from those regions, and operated by them. IDRC does not itself conduct research, rather it assists in the identification process, in the trace and refinement of methodology, in the monitoring of progress and in the evaluation of results.
The research project and programs are of very practical applied nature, focussing primarily on the rural poor. We encourage activities in the fields of agriculture and health sciences, we assist the interdisciplinary refinement and application of new technology, we often help isolated scientists without access to the materials of their colleagues through the creation of information systems for basic development data and through the dissemination of bibiographic and other materials, many of them prepared within the centre.
In short, IDRC is international both in scope and in structure, and most important for our presence here, IDRC is charged by a statute not only with the task of fostering research, but as well with the task of fostering the mechanism for the dissemination of information. That is, assisting in the distribution of existing knowledge.
The angle under which IDRC has approached its mission towards information has been in two directions:

1) Assisting the world community in the developing linkages - data bank-interconnections, developing in particular MINISIS and being central to the development of AGRIS and DEVSIS.
2) Taking a practical view of the information-function by develop-

ing in particular in Southeast Asia, in Singapore, an institution called TECHNONET - a network of industrial information and extension services to small and medium industry in every country of Southeast Asia. This system has terminal access to sources of information throughout the world, but particularly in Canada.

Wherever IDRC-staff-members travel, and that applies to me here, we are scouting for projects that fit in the spirit that I spoke of, and we try to find finances for it.

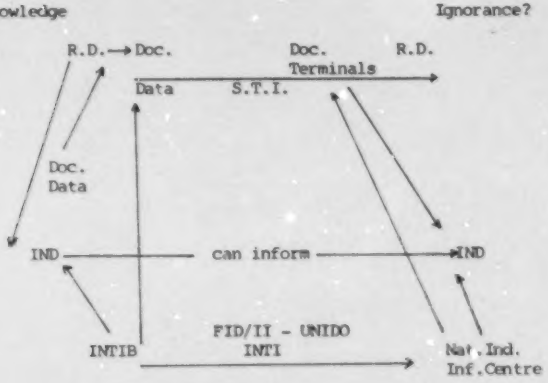
As to your humble servant, I have had associations with the world of libraries by virtue essentially of their administrative insertion in the various enterprises I have been associated with. I was close to the Central Library of the French Atomic Energy of Saclay. Referring to the discussion we had yesterday, there you have a centre with several thousand people, consisting of physicists, chemists, medical doctors interested in the radiation aspects of life. They all are being fed by a central library that under the head-librarian, at least during my time, there was an array of specialists working in the premises of the library, who were medical doctors, physisists, chemists - but their job was to keep constant eye on the research-work being done in the various departments and extracting from the incoming material and from the holdings of the library relevant material for SDI-service and concrete spoon-feeding of information to their colleagues. The structure was spoon-feeding from the library by specialists of various fields, controlled by the head-librarian.

I have also been close to the library of the International Atomic Energy Agency in Vienna back in 1958 and the following years as an immediate colleague in the same division to the head-librarian. There, the procedure was quite different. The library staff was strictly doing its librarian work, and in the various units of the Agency, documentation was a self-service function. But a self-service function by individual professionals that somehow, in the various divisions, without concertations turned to be really the function of a senior secretary, who had passed the stage in age and dignity where she would touch a typewriter. So, she would be a documentalist. And you see that phenomenon happening in various big institutions. Perhaps by a lack of user education with the professionals or perhaps some intellectual lazyness.

In an executive capacity I have been responsible in the early 60s for the library of the OECD/European Nuclear Energy Agency which was inserted in the administrative and external relation service. In the later 60s I was responsible for the central library of OECD, which was part of my external relations division. A phenomenon you find in various institutions: some executives with those administrative external relation capacity who happen to acquire some librarian "Gespür" (flair for) by mere administrative vicinity of supervisory responsibility. Something happened in the early 70s in Vienna at UNIDO: Togehter with the Atomic Energy Acency and certain other UN units the decision was made to establish a central library in the area of common services. And this is how they have slapped together an Atomic

Energy Library, an industrial library, a social services library - it is, from the point of view of subject coverage, an immense and total thing; they are providing the whole houses with the classical services of accession lists, photocopies of the contents of incoming material, etc., and they are trying very hard to add an active feedback and interchange with the readers, they use questionnaires etc.

That falls into my remark of yesterday: "Some eager beavers never have enough, and all the others always get too much". Since the library of UNIDO went its own way I have remained for ten years the head of UNIDO's industrial information section. I finished up as director of public information services for Austria and the Federal Republic of Germany.
But before going back to my subject there (and I had hoped very much that board would slowly be filled, so I would know exactly what to say), I will turn to a board which I filled myself which refers to my specific experience and which may have a bearing on the concerns of the participants here:



Research and Development (R.D.) generates documents (Doc.) and data in quantities and some hidden knowledge that (short of brain-washing or safe-cracking) one never gets at. That is totally out of anyone's reach. Those documents and data flow through scientific and technological information flows (S.T.I.) from the libraries, counters, databanks to documentation-centres' terminals and recipient institutions - the world of ignorance and question-marks. Those who engage in research and development are totally satisfied with all those documents and data; they relish those bibliographic printouts and those documents that may possibly come along with them. And it is important

for everyone who does a research on a mini-point to know what has been done on this subject between Ular Bator and Asuncion as a base for his further efforts. The scientific and technological information flows have been institutionally the worry of the non-governmental FID and UNESCO with its UNISIST program. They have considerably served the dissemination of information throughout the world and lent a higher dignity to the profession of librarian,and the more computerized the librarian, the greater is his grade of dignity.

The world of industry, I would say, differs. Concerning knowledge in industry, you have a segment of it which generates documents and data, and much of that gets into the STI. This free flow of documents and data consisting of industrial knowledge is important, but by far not the essential. You have a sector of knowledge, proprietory knowledge, in industry where this is fed into and which is totally unaccessible unless you use undecent means. Developing countries seem to believe that sector of preserved information,simply because it doesn't flow around, fills the horizon. The role of international organizations, the role of development promotion centres is to persuade developing countries, that this sector is not as big as you think, and in the intermediary world between this free-flowing information and that hidden knowledge, you have a world of available knowledge which is perfectly fit for cheap, direct access on excellent terms.
Now, you have a matching situation in the world of ignorance. You have a limited sector of industry that is able to identify its problems and to express it in the form: If I get these data and documents, my problem is solved. That is the more sophisticated sector of industry with information-gate people who can identify problems and find those documents they belive they need. But that is only a limited segment. The less developed the countries, the fewer engineers, the fewer there are people who can identify problems and translate it into the request for documents. Then you have a sector of total refuse of information and absolute block-head neglect of any cooperation. And you find that everywhere. The role of our organization is to try to reduce this hard-core of willful ignorance.But between these two extremes you have a magma of unformulated requirements and problems that are to be solved. It will not be solved by a slow progress and extension of that sector that thrives on documents and data. It is absolutely necessary to set up in developing countries national industrial information centres whose role is to have access to the terminals and the documents. They can translate some of this into the request for documents and data. They are the best customers of those documentation centres, but their industrial information officers are people with industrial and economic experience with a slight dabbling of documentation technique; but their function as information officers is essentially that of connaiseurs of industry by sector and its economic and financial problems.
Who else is informing industry? You have a commercial information flow. Those who produce capital goods in developing countries supply as much information it takes to persuade someone to invest in these product-services or -goods and they transfer as much information as in their contracts for transfer of technology; they have

committed themselves to them, but not more; they don't pretend to facilitate an appropriate choice between available technologies.This is the role of another circuit, and I would call it, by difference with the scientific and technological information flow, the industrial and technological information flow. This requires a central international structure - one, or more. In UNIDO it is INTIB (Industrial Technological Information Bank) the function of which is to explore for the benefit of developing countries through those national information centres this vast area of run-out patterns of engineers retired, who are quite ready to offer directly their services to settle a new technology motion and to answer inquiries.

I now want to talk about the international cooperation in information, of which DEVSIS is a part. In the late 60s and early 70s there was a general vision in the UN system that a brave new world was on the threshold to happily exchange information about everything, and the only problem was to get organized. John Woolston, at that time, was the head of the information services of the Atomic Energy Agency. There you had a superb model situation which, unfortunately, could not be found until today anywhere. The political situation: in every country there was some kind of atomic energy program, there was a national authority which decided once and for all that this document was classified and the other was free for circulation. This being said, everything that's military classified etc. is completely out of sight, and the problem was, what to do with the other things. In those years informatics were at their very start, and so was the field of Nuclear Energy Agency. There was not a formular but built-out of documentation through many, many years before informatization evinzed. So, this was a perfect case where one could practically start with computerized information at the same time as the start of that new science and technology. And then there was a political will of the Soviet Union and the United States of America that they were extremely curious to look at what the other side was producing, and if it was not secret they could do so. On that basis INIS was started and it turned out to be a success. The producer and consumer community of nuclear energy literature is extremely homogenous. No centre looks different from that run at Karlsruhe or anywhere in the world. People who work in these institutions are very much the same type of people.

After the success of INIS one asked why not go to agriculture? Certainly the ministers of agriculture in all countries happen to have an important role and they had access to all the documents relevant. AGRIS was the second cooperative information system that came into being and which, too, is a success. There, the difficulties ly in the mass of agricultural-orientated literature produced in the world, which cannot be compared to the amount of literature on nuclear energy. But it serves its purpose and is a success in which IDRC has been markedly involved.

AGRIS as well as INIS are based on the computers in Vienna in the hands of the Atomic Energy Agency. As a neighbour of it in Vienna UNIDO said, why don't we make an INDIS (Industrial Development Information System)? There we've got to do something quite different. Industry in the Western countries at least is not something that a

government has its hands on. Not at all to the extent that applies to agriculture. Much of the knowledge and know-how even written into documents and data is not something one would wish to flow on a press-button basis. There was no enthusiasm on the part of any of the industrialized countries to feed industrial data into a system like that. That is why INDIS turned out to be much more modestly and put up a set of abstracts. Up to now there are some 15.000 items. All this package of UNIDO abstracts is published in a purple book and has been integrated in the IDRC-operated bibliographical data bank and included in the MINISIS bibliographic package.
My experience with UNIDO is some amount of classical bibliographic services and an intense insistence on that last segment of the information flow which goes not to an undetermined user group but to the very end-user who has decisions to make, and who wants pre-cooked elements for decision-making rather than tons of paper.

The DEVSIS proposition came after the success of AGRIS and without thinking much of INDIS development as a genuine proposition. It was thought that the international community would be ready now to take over since development was a thing which was thought in need of a new cooperative information system. During all those years there have been efforts in the UN system to make it adopted as a project starting at the top and going down to the bottom.
In those years money suddenly became short and perhaps the political will was not there, and the minus-growth in budgets may have added to the problem.
There was another idea of establishing a world-wide network for scientific and technological information. This idea has been worked on in the early 70s and brought to the floor at the Vienna conference on science and technology for development in 1979 where it was regarded the only outcome of this maxi-conference. The idea was to establish a GIN (General Information Network). This was a vague concept but had a vision of satellites everywhere, terminals and data-banks everywhere, and a fabulous exchange of all manner of information at low cost practically to any-one throughout the world. The argument was, since we are working on this idea of GIN, why worry about a sector of things like DEVSIS? So GIN became the object of inter-agency meetings and all sorts of people are writing interesting papers. There was one interesting proposal written by a professor in information-sciences, Prof. Slamnecka, which was seriously discussed. His vision was a central console somewhere in the world, where everyone with a problem , be it metaphysical, technical, sociological etc. would telex not a request for literature on the subject but for the telephone- or telex-number of the man/woman who knows. It was a sort of maxi-reference system. There is one international information system that is of that nature, and that is INFETERA. It is a UNIP institution, which propose not to make avaliable Mr. or Mrs. x, who wrote a paper back in 1956 on something that occupied his mind at that time for three months, but Mr. or Mrs. y who is living right now and has a phone-number and is competent on this subject. This has been perceived to be a danger to bibliographic data-banks in a period of increased illiteracy in particular among the cultured classes.

In this respect I can refer to more modest enterprises so as to draw up guides to sources of information. Many people have been doing that. My previous institution and myself have been drawing up from every sector of industry guides to information sources that are very much appreciated.
But what happened to the bright idea of a centralized DEVSIS? Since it did not come in through the front door it has been tried through many kitchen-doors. The paper by Mrs. Shearer gives a listing of DEVSIS related enterprises. There has been a DEVINDEX Canada in 1975/76 which represented an effort to retrieve every piece of literature relevant to development sciences generally in Canada, but also of countries who kindly contributed - the Federal Republic of Germany was one of these. The DEVINDEX Canada has been widely disseminated and shown to everyone that it was a practical and useful thing.
India developed its own DEVINDEX India in 1981, and also in Australia a respective DEVINDEX is in preparation.
There have been DEVSIS-type operations on which IDRC had some influence or gave some money. In Tunesia there is a national DEVSIS operation which is computerized, and in Thailand, Pakistan and the Philippines there is one manual.
I should also like to draw your attention to a relevant place - IBISCUS in France. We have been doing that without specific reference to DEVSIS. But the idea is spreading. And it is not excluded that when many countries have done their national thing they will come together and produce on a democtratic basis what has been thought of on a technical basis.
Furthermore, there are regional systems, like INFOPLAN around CEPAL in six latinamerican countries, which produced a PLANINDEX in 1979. There is CARISPLAN relating to six countries in the Caribbean, which produces ABSTRACTS (of development literature). And then there is PADIS, a maxi-technical network of Africa, which startet PADIS/DEV, the DEVSIS-phenomenon for Africa, in 1980; you have seen the DEVINDEX Africa today. - In Asia there isn't anything of this type yet, but a certain network is going to be put up this year or next year, and there has been a meeting in Colombo to discuss the possiblilities for the future; something is most likely to come up for Asia and Southeast Asia. In ESCAP there has been produced some service in relevance to development literature. - In the Middle East, though the political situation is difficult, some things have been solved, concerning ECWA. As far as the UN is concerned, they have established a development information system which is producing development information abstracts (DIESA/DIS).- Stopping to talk here I am prepared to answer any questions that may arise concerning all these projects.

4.2 Demonstration of MINISIS

The second half of the day was taken by an introductory lecture on MINISIS plus practical demonstration of the

program by Mr. Wehmeijer, the head-words of which are reproduced here:

MINISIS

- Information Management System for structured and not-structured information
- created primarily for use in a library environment.

MINISIS
IS NOT
- a rigid program-set for one application, but is
- a flexible tool to develop without computer programming a particular application.

History of MINISIS

1968 ISIS ILO Geneva
- batch
- main frame

1978 MINI-ISIS IDRC Ottawa
- mini computers HP-3000
- online facilities
-latest technologies in software development.

Integrated Data Base
- relational
- flexible
- easy to understand.

Fast Access by inverted files
- fields
- words
- terms.

Messages, Commands, Error Messages in seperate files
- dialogue with the system in the language of the user.

Efficient Use of Computer Resources
- fields of variable length
- repeatable fields
- repeatable groups.

The Menue of MINISIS:

1	Entry	2	Modify	4	Print		
5	Query	6	Compute	8	List ddt		
9	Release	10	Isoconv	12	Invert		
13	Datadef	14	Thloader	16	Batchin		
17	Recovery	18	Exit				

Query
- Fast searching (inverted files)
  - fields
  - words
  - terms

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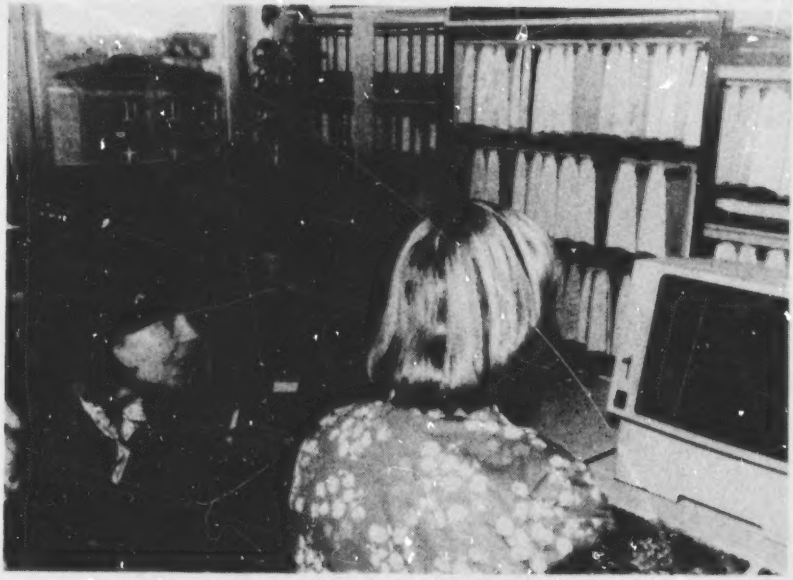

EN BERLIN

- Fast searching in THESAURUS (multi-lingual)
- Text searches (slow)
- Boolean operations
  - AND
  - OR
  - AND
  - EOR-
- Right truncation
- Operators: =, (,), (=,)=, ()
- Looking in indexes
- Choice of printformats.

After the introductory lecture, MINISIS was shown to all participants, divided into two groups, in operation on the HEWLETT PACKARD 3000 machinery. Practical exercises took several hours.
The participants learned that MINISIS, which presently can only be used in combination with the above-mentioned hardware, will soon be usable on micro-computers, too, since IDRC is working on a corresponding solution.

5. PROCEEDINGS OF OCTOBER 13, 1983

5.1 Working Groups

The morning of this day was used for sessions of different working groups. (For the results of the groups, see pp.)
The preoccupation of the various groups as well as the chair-persons were as follows:

1) Interlibrary Exchange (Exchange of Publications etc.)
   Chair: M. Klatter

2) Research Register and Dissemination
   Chair: V. di Giacomo

3) Future of EADI I&D Working Group
   Chair: H. Peters

4) EDP and DEVSIS
   Chair: G.W. Edelmann

5) Regional Associations
   Chair: A. How

6) Preparation of Madrid EADI Meeting
Chair: D. Danckwortt

7) Scandinavian Working Group
Chair: O. Nørgaard

5.2 Town Tour

The afternoon of this day was occupied by a guided town-tour of Berlin with the possibility of seeing additional Berlin institutions, shopping, etc.
The evening of the day was taken by a Farewell-Party for the participants of the Conference at Villa Borsig.

6. PROCEEDINGS OF OCTOBER 14, 1983

6.1 Summary Session / Conclusions and Suggestions

The Summary Session was convened in the morning by D. Danckwortt in order to draw practical conclusions and make suggestions derived from the Conference.
As to the conclusions and suggestions the participants of the Conference agreed to the following items:

1) I & D Cooperation Questionnaire
In order to improve library and I&D centre cooperation EADI secretariat is asked to produce a corresponding questionnaire, to be published in the EADI-Newsletter.

2) Standardization of Registers
OECD is kindly asked to organize a meeting in Paris in 1984 dealing with the use of standardized registration sheets on research projects and research institutions.

3) Updated List of Research Registers
This task has to be performed by EADI as soon as possible.

4) Study

a) Data Bases

b) EDP Systems

EADI is asked to mobilize financial resources for a corresponding study of Data Bases and EDP Systems used in the field of development policy.

5) EDP Checklist

An EDP Checklist has to be established in order to ease decisions when the need for use of EDP comes up. DSE will try to establish such a list.

6) Regional Associations' I&D Cooperation

It is necessary that regional associations meet regularly in order to improve cooperation. DSE will look for corresponding support of this.

7) Nordic I & D Network

The Scandinavian Working Group of the Conference decided to continue regular copperation and meetings.

8) Support Building National Networks

Pressure on Governments to establish national networks must be increased in order to create the preconditions for international networks.

9) Rotating Meetings

In order to give I&D Working Group members the possibility of more international experience, attempts should be made by different nationals to give the opportunity for holding I&D meetings in their respective country.

10) Election of Convenor and Co-Convenor

Concerning the I&D Working Group, Convenor and Co-Convenor for its Madrid meeting were elected at this Conference.

11) Madrid: EADI/CLACSO I&D Cooperation

Since cooperation between European and Latin American I&D institutions must be strengthened, EADI and CLACSO will hold a corresponding meeting during the Madrid Conference.

12) Exchange of Staff

In order to enlarge international experience of librarians (and documentalists) all efforts should be made to exchange staff between various countries.

13) Updating of Macro-Thesaurus

The Conference asks for the continuation of updating of the OECD Macro-Theaurus in coordination with the regional associations.

14) Miscellaneous

In view of Tanzania running out of funds for library work, several concrete examples of help were presented; more help is necessary.

6.2 Summary Session / Election of Convenor and Co-Convenor for the Madrid I&D Working Group Meeting

Three persons were proposed to act in various functions:

1) D. Danckwortt (convenor of the working group)
2) M. Klatter (co-convenor, acting until the Madrid meeting)
3) K. Hagen-Andersen (co-convenor, acting after the Madrid meeting).

No other candidates were proposed, so that the candidates were elected by acclamation. All candidates accepted election. Mrs. Andersen agreed by letter later.

It was noted that as far as the preparation for Madrid is concerned, no mediterranean institutes are represented. EADI secretariat will concentrate on this problem

in the course of further preparation of the Madrid meeting.

6.3 Summary Session / Evaluation of the Conference

The Conference was evaluated by the participants in written form and handed in to the chair-persons. (For the results, see: ANNEX, 10).

6.4 Closing Speeches

6.4.1 EADI (D. Hoftijzer):

Yesterday, it became clear that many participants knew not too much about EADI in general. Therefore, I would like to point out in a few words something about history and structure of EADI.
EADI was created back in 1974, when there was a preparatory conference in Gent (Belgium), and it was finally and officially formed in 1975. EADI was created on the request of the Regional Associations of the Third-World-Countries who were looking for a kind of counterpart in Europe. Especially CLACSO was very active in this respect.
The aims of EADI, you could say, are twofold: on the one hand we want to facilitate and stimulate cooperation with colleagues in Third-World-Countries; on the other hand we want to have a coordinating role - a network-function within Europe with colleagues especially in the social sciences. Not expressly but implicitly these two approaches have been discussed here. The agenda of this meeting reflects more or less this twofold aim. The participation of the Third-World-Associations has been very important.
As to the structure of EADI: there is a general conference every three years (it is the supreme body of the Association); in between the daily operations are decided by an

Executive Committee, which in fact, though not officially, consists of representatives of most of the member-countries (more correctly: of countries where we have members).

We have two kinds of members: institutes and individuals. The possibility for individual membership was created because in quite a number of cases researchers are the only ones who concern themselves with the government studies; since we cannot include government-departments this individual membership was created.

The substantial work of EADI is done within the working-groups. There are 24 of them at the moment. Some of them are very active, like the I&D Working Group, others don't have financial and organizational possibilities and only meet at the general conferences.

One of the most important tools within these operations is the publication program. It consists of four elements:

- First of all the book-series; two volumes were published - one on the Budapest Conference in 1981, and the second deals with Women in Development. Four other publications are in preparation, and we hope that this can show our members and people outside what the result of work of various working-groups is.
- Second there is the series of working papers which are meant to publish the preliminary results of research done in the framework of the working-groups.
- Third we have the bulletin, some copies of which you willhave seen here, which is meant for substantial information and articles related to working-groups or related to the government policies in general terms.
- Fourth we have the newsletter, in the first place for practical informations on publications, conferences, seminars and things like that.

It has been mentioned this morning that the five Regional Associations are gathered in ICDA. For EADI, ICDA is

of special interest because we are the only association within ICDA, that works mainly (not only) on problems of other regions than the region we come from. We are working more or less on the problems of other regions, while for instance CLACSO is working on the problems of it's region - Latin America. So, the cooperation with CLACSO and other organizations within ICDA is of special interest for our work.
As concerns the situation in Europe development studies is clearly under attack - it is out of fashion. That is to say that in development studies, more than in other disciplines, we are faced with budget cuts. I think that in many cases institutes and individuals tend to tip EADI as a kind of luxury. But I am convinced that, if your are faced with severe money constraints, international cooperation is important. I would like to ask you more or less to be agents in a kind of advertising campaign: look at which institues in your country are not yet members of EADI but should be member!
As to the seminar itself: I am not an expert in this field, so I can not judge it in substantial terms, but I think that quite a lot of questions for further discussions have been raised. This was part of the continous working process. This is one of the working-groups that prepared clearly for the next meeting. Continuity in work is, I think, very essential. I think that this meeting was a good success, and I would like to thank the preparatory-committee for it's magnificent work and extend our thanks to all members of the staff and DSE in general. Meeting again will be a rebirth, and I hope to see you all in Madrid!

6.4.2 DSE (D. Danckwortt):

D. Danckwortt expressed his gratitude to the participants

who had attended this EADI meeting and his thanks to the members of the staff of the Conference.
The Conference was closed at noon.

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A G E N D A

Sunday, 09.10.1983

Arrival
16.00 h Meeting of Steering Committe
20.15 h Opening Session - Presentation of the Participants - Discussion of Agenda

Monday, 10.10.1983

09.00 h Computers in Information: Use of EDP in Medium and Small-Size Libraries and Documentation & Information Centres.
Lecture: Mr. Schneemann (Technical University of Berlin) - Discussion - Low-Cost Documentation
Lecture: Mrs. Klatter (Institute for Social Studies, The Hague) - Discussion

15.00 h Thesaurus
Lecture: Mr. Supper (German Institute for Urbanistics) - Discussion - Information Acquisition and Bibliographical Control - Open Discussion

20.00 Reception by German Foundation for International Development (at Villa Borsig).

Tuesday, 11.10.1983

09.00 h User Education / User Analysis. Lectures: Mr. Nørgaard (CDR) and Mr. Steinert (DSE) - Discussion - Exchange of Experience - Country Reports.

14.00 h Visit of "Deutsches Bibliotheksinstitut" (German Library Institute) - Demonstration of EDP.

20.15 h Presentation of Film (History of Berlin) at DSE-Conference Centre.

Wednd., 12.10.1983

09.00 h International Information Systems. Lecture: Mr. de Mautort (CRDI, Paris) - Exchange of Experience - Reports - Discussion.

15.00 h Demonstration of MINISIS - Use of Foreign Data Banks. Lecture and Demonstration: Mr. Wehmeijer (Arnhem, Netherlands).

20.00 h Opera (Deutsche Oper Berlin).

Thursd., 13.10.1983

09.00 h Cooperation on International Level - Fields of Interest - Reports on Practical Cooperation - Exchange of Services between Documentation Centres - Open Discussion - Working Groups.

14.00 h Guided Town Tour

20.00 h Farewell-Party

Friday, 14.10.1983

09:00 h Working Groups - Reports on the Working Groups
Summary Session - Evaluation of the Conference.

8.

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9.

LIST OF STEERING COMMITTEE

1. Mrs. Heidrun Peters
2. Mr. Dieter Danckwortt
3. Mr. Dirk Hoftijzer
4. Mr. Jürgen Horlemann
5. Mr. Ole Nørgaard
6. Mrs. Matty Klatter
7. Mrs. Valerie di Giacomo
8. Mrs. Agnes How

10.

LIST OF LECTURERS

1. Mrs. M. Klatter
2. Mr. R.T. de Mautort
3. Mr. O. Nørgaard
4. Mr. R. Schneemann
5. Mr. D. Steinert
6. Mr. R. Supper
7. Mr. F. Wehmeijer

11.

LIST OF STAFF

1. Mr. Dieter Danckwortt	)	
2. Mrs. Heidrun Peters	)	Chair
3. Mr. Jürgen Horlemann	)	Rapporteur
4. Mrs. M. Kahleyss	)	
5. Mr. B. Fiebig	)	Assistants

12. PARTICIPANTS' EXPECTATIONS FROM THE CONFERENCE

Exchange of views and experiences; update in information and documentation methods.

New developments in library and documentation management; user analysis, user needs; international data banks.

Learning from colleagues; working with documentation/information on Third World countries; ideas I could implement in my country.

Information about the work of other centres; for information and training of the technical assistance going overseas.

Indentification of projects for IDRC cooperation.

Getting new ideas; contacts with other libraries to improve cooperation.

Learning more about other institutions working in the field; exchange of ideas and experience.

Information about other institutions of the participants working with "new media"; possibilities of cooperation in dissemination; information in using "new media".

Management of information centres; possibilities of cooperation in dissemination information.

Cooperation; indexing, abstracting and bibliographical control by computer systems.

More contacts for closer cooperation improvement; information exchange and access to publications.

Information on documentation centres/libraries using "new media"; library users and "new media"; online offered data-bases.

Learn about EDP/international information systems; information about EADI.

Getting familiar with the participating institutions, EDP and international information systems.

Cooperation in acquisition lists; policy among EADI-members; interlibrary-lending and exchange; EDP decision-making.

Personal contact with colleagues; exchange of experiences of other people using EDP in library.

Cooperation with other organizations; low-cost documentation; use of Thesaurus; see Berlin.

Gaining knowledge in development information and documetation; exchange of experiences.

Contact with DBE; organization of other information and documentation centres; working with computers in information.

Acquisition of new professional skills, refreshing of own knowledge; exchange of experience; opportunity to talk about our own problems; to receive guidance and to stay in the framework of our own working condidtions.

To get further information about the wishes of participants concerning the activities of the secretariat; to get ideas of recent developments in the field of information and documentation.

Cooperative arrangements; coordination of acitivities; personal contacts.

Learn about data-banks and library automatics, because OECD Development Centre is just starting to computerize the library; exchange of experience with other librarians specialized in 'development'; personal contacts.

Concrete agreements for improvement; exchange of experiences.

Interaction with other libraries on common problems; exchange of information on joint cooperation projects; application of computer technology to medium-size documentation centres.

Improvement of cooperation; exchange of experience.

To be able to know what's going on, especially in the field of exchange of current research-data (to promote contacts between researchers in the first place); interest in systematic dissemination of trend-reports, evaluations, overviews; also about the IDRIS-pilot-project.

Discussion of the constraints which have prevented an efficient system for exchange of information until now (lack of implementation of recommendations); giving more clarity to the scope and relevance of international databases: what type of system is needed that will make information accessible/available? Possibilities of cooperation and role of EADI; investigate the views of LDC-institutes (regional associations) on the role of the international information systems and their participation in these systems; discuss the role of EADI in this field.

Exchange experiences, improve cooperation, learn about automatization; identify people working with same subject-areas in order to exchange material and information.

Find out what's happening on the EDP-sector among the participants.

Experiences of people working in documentation; cooperation and assistance.

13.

EVALUATION OF THE CONFERENCE BY THE PARTICIPANTS

In the questionnaire, the participants were asked to state their satisfaction/dissatisfaction in respect to:

1. Program / Content / Method
2. Conference facilities / Acoomodation / Meals
3. Suggestions for improvement.

The answers, given to these questions, can be summarized like this:

1. Program / Content / Method:
   Very good: 7 Good: 16 satisfactory: 2
   not satisfactory: 0

The remarks concentrated on two demands:
- Perhaps too many topics compared to the time available;
- more practical demonstrations!

2. Conference facilities / Accomodation / Meals
   Very good: 20 Good: 3 satisfactory: 1
   not satisfactory: 0

The representative remarks:
- Excellent organization;
- personal contacts were very important.

3. Suggestions for improvement

   The suggestions concentrated on:
   - More time for Working Groups;
   - more in-depth discussions on one or two topics only;
   - more material in advance (e.g. summary of the lectures);
   - more participants form developing countries;
   - more time for informal discussions;
   - more material in the exhibition.

14.

WORKING GROUP "INTERLIBRARY COOPERATION"

As a starting point of the working group's discussion, there was the notion, that there had been quite a lot of recommendations in the past, but very little had been implemented. So, the obstacles have to be identified.
In order to solve the problems of bi-lateral cooperation between the institutions, two main ideas were put forward in the working group:
1) Try to organize more rationally the cooperation between institutions under the point of view of regional interests;
2) organize cooperation on subject matters.
What is needed more and more at the moment, is information about what individual institutions are doing. This, of course, may sound odd to a number of people who participate in the work of the I & D Working Group.
Nevertheless, the decision of the working group "interlibrary Cooperation" was this:
To establish a group of persons who will prepare a good questionnaire about what institutions and people therein are actually doing. The aim is to gather informations on the individual institutions and what individual persons within these institutions are doing - the latter being a most important factor to find out.
To work out this report, the working group elected five persons (Mrs. Bogdan, Mrs. Babini, Mr. Edelmann, Mrs. Rylander and Mrs. Wagacha). Again, the working group stressed, the aim is not to get informations about the structure of the institutions , but rather about the practical work performed, about the main fields of work and about the people doing this work. From there the working group expects hints for practical cooperation, e.g. on documents published by the institution.
The questionnaire is also meant to improve cooperation between developing countries and industrialized countries in the field of information and documentation. That is

why two representatives from developing countries will participate in the above-mentioned task. The exchange of documents between these two types of countries must be improved.

The working group stresses the fact that it does not intend to work out a new directory, of which a number of valuable ones already exist, but rather wants to establish a new tool for more direct communication.

The questionnaire will be distributed

a) among the members of this Berlin EADI-meeting,

b) filled in by the participants of this meeting and returned to EADI.

Furthermore, the questionnaire should be circulated to the other EADI-members not present at the Berlin meeting, and be published in the EADI-Bulletin, so that other regional associations may make use of it as well. The EADI-members should be asked to kindly fill in the questionnaire, so that the EADI-secretariate will be able to present the collection of answers to it's members. The same procedure should be used by the regional associations as well.

It was noted that the questionnaire is of internal character (internal cooperation), and that the results are not to be published for everybody.

In the discussion about the working group's results it was pointed out, that, as far as the formation of interest-groups is concerned, there exist groups like that within EADI and that everybody is free to form such a group. The same refers to cooperation on subject matters. As far as the exchange of acquisition-lists is concerned, the working group dropped the topic very soon, because an institutionalized exchange between all member institutes would lead to the reception of more than hundred lists or so per month by each institute, with too many duplicates among the lists. Institutes should therefore,

on bi-lateral agreement, exchange needed acquisition-lists. The same rules should apply to publication-lists.

Another question raised referred to the lending of books between institutes on national or international level. Most instiutes will only send copies, for which institutes in industrialized countries have to pay, while institutes in developing countries get copies free of cost. But due to bad experiences in lending-out books, most institutes point to the use of the normal inter-library lending system. -
As to the above-mentioned questionnaire the proposal was made to ask the institutes how many copies of their publications they exchange with other institutes.-
A general recommendation refers to publication-lists: Titles, at least, should be bi-lingual, and, if possible, also the indexing! Because national publications are, very often, also of interest to the international public.

15.

WORKING GROUP "RESEARCH REGISTER AND DISSEMINATION"

The following presentation was made to the group by Mrs. Di Giacomo:
The situation of information activites on current development research is complex and still not too well organized - there is not yet a large public data base covering the field of development research, therefore making it difficult to obtain information on an international level.
The five Regional Associations of development institutes (ICDA) have felt that they could play a role in this field and set up for this purpose the "International Development Information Network" in cooperation with the OECD Development Centre, as the central point for the collection, processing and dissemination of information

on development institutions and on-going research.

The situation in European countries: Several of them publish national research registers (the Federal Republic of Germany, the United Kingdom, Denmark, Norway, Sweden, the Netherlands, etc.); some of them are computerized, others are compiled manually. In spite of an initial effort of EADI in its early days to define a common questionnaire and organize cooperation, little standardization has been achieved in respect to selection criteria, contents, processing techniques, regularity of publication etc.

With a view to make available the information on all European countries, in 1978, the Development Centre compiled information on research going on in countries which were not covered by a national register. This was computerized but unfortunately it had not been possible for the Development Centre to feed in it's data base the informations published at national levels.

The situation regarding Third World regions: At the request of ICDA the OECD Development Centre produced, from 1978 to 1980, three computerized research registers on Africa, Latin America and Asia.

The up-dating of these registers is under way: two volumes were published in 1981 for Africa (300 institutes and 900 research discriptions), two similar volumes will be published for Latin America during the first semester of 1984 (400 institutes, 1200 research prospects), and in 1985 for Asia. This work is carried out in close cooperation with CODESRIA, CLACSO and ADIPA.

These registers are published in special issues of the Development Centre Liaison Bulletin which is widely circulated free of charge to contributing institutions. The data base of which these registers are the by-product, is available for interrogation upon request.

Since the Development Centre will be embarking in a

huge enterprise when doing the survey on Asia, the views of the Working Group would be useful to confirm the use which is made of the regional registers in the institutes represented, and what information was more demanded by users.

For the time being the Centre does not see a clear role to play regarding its contribution to be European data base until internal problems (software) are solved. Building up a European data base should be a common endeavour with an appropriate and effective division of labour.

Summary of Discussions:

A) After Mrs. Di Giacomo's oral introduction the working concluded by making the following recommendations, in order of priority:

1) Lists of research registers available in each country should be established (national lists). Institutes in countries where a national register does not exist should take responsibility for finding out appropriate information.

2) Lists of research registers should be made for

a) Europe, and published in a special issue of the EADI Bulletin in 1984. This information should be up-dated every two years.

b) List of international registers for all regions.

3) A meeting on standardization of registers should be organized, possibly in Paris with the sponsorship of UNESCO and/or the OECD Development Centre.

4) Descriptions of existing models describing the methodology for compiling registers (which could be usable by other institutes) should be made known.

B) A few questions were left open such as:

1) How do we relate our work to technical research registers being produced by other institutes.

2) Compilation of working papers available in institutes.

It was felt, however, that they should be included in libraries' lists at national level.
3) What about research done by private firms?
4) How to start EDP in compiling registers. Possibility of start a small clearing house with a few institutes exchanging tapes.
5) The problem of dissemination and public relations for existing registers produced by individual centres. How to publicize and disseminate them so that they reach the interested audience.
C) Finally, the Working Group confirmed the usefulness of the research registers on Third World regions, produced by the OECD Development Centre, and recommended the completion of the up-dating under way for Africa, Latin America and Asia.

In the discussion of the working group's report it was considered necessary that the secretariate of the I & D EADI Working Group should approach those countries with no national register in development research in order to start consultations on how to solve this problem.

16.

WORKING GROUP " FUTURE OF EADI I&D WORKING GROUP"

The working group regretted the unfortunately unavoidable lack of continuity in the composition of the EADI I&D Working Group due to changes in personnel in the member organizations, which also meant that several of the participants knew little about the past work of the I&D Working Group or EADI in general.
It was suggested that to alleviate this situation each individual participant of the future working groups should be provided a very brief informative sheet about the work of EADI and it's past work and about proposi-

tions of the Working Group in particular, so that the "new" Working Group could build on and continue previous work done rather than re-do all the groundwork all over again.

This information should be sent together with all the finalized program details to allow people to prepare themselves. Similarly a kind of policy statement, i.e. issues which should be discussed with some kind of guidance as to what topics exactly you plan to tackle, should be sent out beforehand and a reminder to the participants to bring them documentation about their institution and it's output as well as information about various networks and systems, bibliographical and otherwise existing in their country.

Another point touched on was that of who should be responsible for the Working Group and its meetings.

The work of DSE was greatly appreciated and a switch from DSE was not considered a wise move as it might destroy what little continuity there is. On the other hand it was acknowledged that it may not be fair to let one member carry all the responsibility and it was suggested that each time at least one other member organization should be involved and liaise with DSE in the organization of a meeting, so that not all work was carried on DSE's shoulders.

Changing venues could also be used to their advantage by making the country concerned and the services it offers in our field of research the focal point of the seminar plus maybe having one other focal point like the work of an international organization possibly located in the country (e.g. when in France, concentrate on France, and maybe also look at UNESCO or OECD).

Reflecting the need for tighter bibliographical control on the national scale, the working group suggested that we should try in our respective countries to further na-

tional centres and build up information about existing networks of people and/or institutions.
For future activities it was suggested to have a closer look at what is available in our field in on-line data bases. A closer scrutiny of actual contents and coverage of individual basis is envisaged with references to search strategies and terminologies as used.
A research project should be carried out, the results of which should serve as the basis for the next meeting in 1985, i.e. gaps and duplication, how can on-line data bases be utilized for "LDCs" etc.
As regards this research project: a small group of three or four people at the most should draw up a detailed research proposal and seek funding for it an a researcher to carry it out. Mr. M. Guignard expressed interest to be part of this project.
This evaluation of the report should be supplemented with a discussion on practical efforts to improve U.A.P. - Closer cooperation with other national/international organizations which have been active in this field is recommended.

The discussion of the working group's proposals contributed the following additions:
- The report of the suggested research-project should answer the question whether printing-outputs of data bases are available;
- a policy-paper should be prepared for the next meeting;
- the next meeting should include more small working-groups;
- the working groups should have a convenor as well as a co-convenor;
- somebody in EADI should be in charge of international data bases, and the next EADI-meeting should discuss this proposal;

- new ideas for funds must be created; since small libraries in developing countries depend much on their delivery capacity a good acquisition policy must be worked out.

17.

WORKING GROUP "EDP & DEVSIS"

Although the Working Group was supposed to talk both about EDP and DEVSIS, it decided, because of better competence, to concentrate on EDP. Here, again, it dealt with micro-computers which are considered to be most suitable for small libraries and documentation centres. Following the discussions, the working group suggests:
- EADI-members (especially those of the I & D Working Group) should exchange experience concerning the use of micro-computers and put emphasis on which software-programs are used. This task is considered to be a little bit difficult because in some cases there rules confidentiality and no information is given. Therefore two stages of work are suggested:
1) Collect experiences as mentioned above, but without publication; rather, the collected information is sent to the informants.
2) After having checked the informations the informants should agree, if no objections arise, that the collected informations are published.
The aim would be to convey this checklist, together with other possibly existing lists, to those institutions which are about to decide on working with EDP. It would be decisive that the checklist is provided by those people who actually work with EDP, i.e. not by a head of library or director. Furthermore, a questionnaire should not include a formal list of given systems, but rather ask for the practical experience with the EDP-system in use at the given place.

A second aim should be to establish a checklist on software in use, including critique of programs.

Discussion of the results:

Discussing the results of the working group it was decided to collect the relevant material on national levels first; this work is expected to last at least 1/2 year up to 3/4 year. The results of the work should be presented during the next meeting of the working group. As far as the coordination of this work is concerned it was agreed that Mr. Edelmann (GTZ) would act as coordinator, assisted by Mrs. Pluymert (IHS).

18.

WORKING GROUP "REGIONAL ASSOCIATIONS"

This group was formed based on issues and questions raised by participants during the first days of this meeting. Mainly by participants of the Regional Associations present here (ADIPA, CODESRIA and CLACSO).
In the research area there is already cooperation among Regional Associations through the Interregional Coordination Committee of Development Associations (ICDA).
As an example of cooperative research we can mention the regional integration research, coordinated by EADI, the rural development research, coordinated by CODESRIA, and transnationals, coordinated by CLACSO. In information and development there has been cooperation mainly through international projects collecting data about development aid institutes, research and publications. As an example the OEDC development directories, the DIRE UNESCO data base, etc. But there is not a systematic information and development cooperation among the libraries of those Regional Associations.

The Regional Association's meetings could be used, so that the representative of each Regional Association participating in it makes a presentation about what is published and what research is done at his member-institutes.
Each of the participants here from Regional Associations will do the necessary in his organization to be able to know about the meetings in advance, so as to be able to prepare material for distribution and a lecture if possible.
Direct links between Regional Associations are important and those interregional activities are part of the ICDA purposes.
The information and documentation person from each Regional Association should be part of the interregional meetings as a way to improve cooperation in these matters.

This participation could be eventually supported by DSE.
The purpose of this information and documentation cooperation among Regional Associations would be:
1) To improve documentation and use of primary and secondary documentation about development issues produced in the developing countries.
2) To documentation and use of primary and secondary documentation of development issues produced in developed countries.
3) To improve documentation and use of international facilities (as an example International Information System, ICDA News, Networks etc.).
Possible areas of cooperation among Regional Associations were mentioned:
1) Exchange of mailing lists.
2) Include in theRegional Association's newsletter the International Association's information and documentation activities.

3) Send the newsletter not only to the Executive Secretary but also to the Information & Documentation Centre of Regional Associations.
4) Considering the very important issues raised during this meeting the representatives of Regional Associations from developing countries recommend that in future meetings of EADI information and documentation issues should always be considered. - Stress the participation of the members of Information & Documentation Working Group of EADI!

In addition to the findings of the working group it was noted, that ICDA recently produced it's first newsletter and that informations for the next edition should be sent in.
Concerning the Madrid-meeting it was proposed that a conference of EADI and the representatives of the five regional associations should take place; the same refers to the level of the representatives of information and documentation.

19.

WORKING GROUP "PREPARATION OF MADRID EADI-MEETING 1984"

The working group talked about the general conditions of the conference, which will be held from September 3 - 7, 1984 in Madrid. As to the actual state of planning there will be probably three half days for the working groups (two mornings, one afternoon).
These three half days were planned als follows:
1) Program of the Information & Documentation Working Group : Review, report on activities, report on recommendations of former meetings, program for 1985
2) Special meeting on EDP in order to see the progress made in this field (also discuss the results of the

checklist on EDP and software); representatives of IDOC and EURONET should be invited (demonstration of on-line).
3) Cooperation CLACSO/EADI, i.e. cooperation between information and documentation centres in Latin America and Europe as a model for other regional cooperations.
This will be included in the letter of invitation by EADI-secretariate. The convenor should also be the rapporteur - in the sense of division of labour.
A call for papers is proposed, especially for this part of the program (EDP and cooperation).
As far as the participants are concerned, it is hoped, that the members of the working groups will take part, and there should be an invitation to all member institutes. This means that between 30 and 60 persons will participate in this session of the working group.
Another special activity will be exhibitions:
1) Publishing houses should be asked to show their production (this is already on the way).
2) Member institutes should be asked to show their activities.
Participants in the exhibitions should be asked to inform in advance about their exhibits, so that an exhibition-guide can be produced.

20.

SUMMARY REPORT OF THE "SCANDINAVIAN WORKING GROUP"

The working group managed to hold annual meetings during the last years and by this establish continuity of work. At this meeting the working group went through the agenda of the last meeting in Bergen in February 1983, to see what was left open. After having done this the agenda for the next meeting was discussed, which is going to take place in Copenhagen in March 1984.

New members of the working group could be affiliated (from Finland and from Sandö U-Centrum, Sweden) without enlarging the group too much.
Discussing the joining of the Nordic Union Catalogue for periodicals, it turned out to be easy for Norway, since there exists a clearinghouse, but difficult for other countries. Nevertheless, the working group considered it a necessary task to encourage libraries to join the Nordic Union for Research Librarians.
The working group proposed the project to establish a Union catalogue of journals issued in developing countries, which should fulfil two main purposes:
1) Increase the ability of the libraries to deliver material form developing countries;
2) increase cooperation between libraries and, as a by-product, reduce duplication.
In working out this project Finland will join, as well as Sandö U-Centrum (Sandöverken) and Mellemfolkeligt Samwikke (Copenhagen).
The next step will be: abstracting of the new journals in the MS-Biblioteksnytt, and the discussion in the national libraries about interest, possibilities and financing of the project. The use in public libraries should be encouraged. Furthermore, every participant of this meeting should write a respective article in the national library journal.
Another interesting project, forwarded by the Scandinavian Working Group, could be a bibliography about nordic working papers concerned with development research. This could be done by EDP.
The final project proposed by the working group referred to the exchange of librarians; this exchange should consist in the exchange of places of employment.

Discussing the results of the working group, the plenary

session was much in favour of the international exchange of librarians. But, it was pointed out, that as a first step the existing possibilities should be used, because longer stays in foreign working places have shown to be very complicated (insurance, working permission, question of languages). In any case experiences of such exchanges should be written down and discussed in the future (e.g. the CODESRIA/IDOC exchange).

21.

DEVSIS-TYPE SYSTEMS AND ACTIVITIES

Catherine Shearer *

The idea of setting up a cooperative international information system for socio-economic development in the Third World was proposed in 1974. It grew out of the realization that a great number of documents (reports, project reports, policy statements, programs and plans) were often very little known outside the institution or department producing them. This fugitive literature of a given country is primarily of interest to individuals involved in development policy-making and planning for that country. It is also relevant to the needs of planners in other countries within the same region, to planners in countries in different geographic regions but at similar levels of economic development, or to persons involved in comparative studies between regions or countries. Much of this literature is never formally published and is not recorded in any library or information system. Due to lack of knowledge of the existing experience, many studies are repeated and valuable resources are wasted.

The International Development Research Centre (IDRC) is a public corporation created in 1970 by an Act of the Canadian Parliament to stimulate and support research for the benefit of the developing countries. IDRC was one of the first organizations to devote its resources primarily to supporting projects which are identified, designed, carried out and managed by research personnel in developing countries and which meet the needs they, themselves, determine to be priorities. IDRC's activities are in four program areas - agriculture, food and nutrition sciences; social sciences; health sciences; and information sciences.

Information science projects supported by IDRC focus on the mechanisms to record and disseminate existing knowledge so that it can be applied to the economic and social advancement of the world's developing regions. These projects include:

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a. support for the development of, and participation in, regional and global cooperative information systems that respond to areas of development priority;

b. establishment of specialized information analysis centres with a specific subject focus;

c. assistance for the development of national information infrastructures in selected countries;

d. training relevant to the needs of IDRC-supported programs; and

e. improvement of information handling tools, e.g. development of computer software and thesauri.

Those activities which deal with development literature, socio-economic development information systems and the development of national information infrastructures will be discussed in more detail.

IDRC was one of six international organizations participating in the DEVSIS Feasibility Study which recommended the establishment of a global Development Sciences Information System (DEVSIS). The resulting report (1) proposed a decentralized cooperative system with national institutions indentifying, processing and generating indexes to the information generated within their own borders. It also proposed that an international intergovernmental organization merge the information and provide the complete international file to each participating country. Thus each country would establish its own national memory and thereby gain access to the information collected and processed elsewhere. This territorial formula, as used in the AGRIS (International System for Agricultural Sciences and Technology) and INIS (International Nuclear Information System) systems, reduces the cost of obtaining information produced by other countries.

DEVSIS, as a global system, has not been implemented. Nevertheless, a number of important development information systems have been started since the Study Team Report.

IDRC has operated an experimental DEVSIS program since 1976 following the recommendations of the DEVSIS Study Team and the UNISIST Reference Manual for Machine-Readable Bibliographic Descriptions (2). In doing so, it identified the appropriate documents produced in Canada, and published Devindex Canada 1975 and 1976 (3,4). It also received experimental input from various institutions in a significant

number of countries, including the Federal Republic of Germany, The Netherlands, the Soviet Union, Morocco, Tunisia, Pakistan, India, Bangladesh, Sri Lanka, Indonesia and the Philippines, which was included in subsequent Devindex publications (5,6,7,8,9,10). India has recently produced a bibliography, Devindex India 1981 (11) as has Australia, Devindex Australia 1975-1979 (12).

At one time or another, several national organizations have also mounted experimental DEVSIS-type operations. Some of these have been computerized, e.g. in Tunisia (13), but others have been manual operations that seek to simulate the type of information retrieval that can be obtained from a computerized system, e.g. in Pakistan (14,15), Thailand (16) and the Philippines (17).

In addition to these national activities, IDRC is providing technical and financial support to regional DEVSIS activities in Latin America, the Caribbean and Africa.

The Latin American Information Network (INFOPLAN) which began in 1979, operates out of CEPAL (Comision Economica para America Latina), the United Nations regional organization in Santiago de Chile. At present, it involves the cooperative efforts of the Ministries of Planning of six Latin American countries (Brazil, Colombia, Costa Rica, Guatemala, Peru and Venezuela) to build a data base of references to Latin American socio-economic planning information and to provide information services to development planners. INFOPLAN produces a printed index, Planindex (18), which contains abstracts of documents entered in the system.

CARISPLAN, the Caribbean Information System for Economic and Social Planning, is the only sub-regional sub-system of INFOPLAN, so far. It is located in the CEPAL Office for the Caribbean in Port-of-Spain, Trinidad. CARISPLAN also began in 1979 and is involved in strengthening national information centres in the Caribbean, and in promoting the exchange of information among them for use by the Caribbean development planning community. It has prepared CARISPLAN Abstracts (19), an index to development literature produced by the Caribbean Development and Cooperation Committee, a subsidiary body of CEPAL, and to the development literature from Antigua, Barbados, Cuba. Guyana, Haiti, and Trinidad and Tobago.

The regional development information system in Africa is PADIS-DEV, the economic and social component of

PADIS, the Pan-African Documentation and Information System. In January 1980, PADIS was created under the aegis of the United Nations Economic Commission for Africa (ECA) in Addis Ababa, with the financial support of several United Nations agencies, IDRC and the African Development Bank. PADIS is a cooperative, decentralized information system whose first phase includes PADIS-DEV. The long term goals of PADIS-DEV are the establishment of an information system to ensure access to the socio-economic development literature produced in Africa; the provision of information services to individuals and institutions in African countries working on economic and social problems; and the strengthening of African national information infrastructures.

Devindex-Africa (20) volumes 1, 2, 4 and 5 contain abstracts of selected ECA documents. Volume 3 is a special issue containing citations to IBRD and IDA documents on African countries. Plans are for a quarterly Devindex Africa which will contain abstracts of documents reported by the national and sub-regional participating centres.

Thus, progress has been considerable in Latin America and the Caribbean as well as in Africa. Although several Asian countries have expressed strong interest in the DEVSIS concept and have participated in the DEVSIS experiments carried out by IDRC in Ottawa, no comparable regional information system has yet been launched for the Asian region as a whole. However IDRC provided support for a Workshop in June 1982, in Colombo, Sri Lanka, organized by the Committee on Studies for Cooperation in Development (CSCD), which assessed the feasibility and mechanisms for establishing a development information network in the South Asian region, and to formulate a framework for the development of such a network (21). As a result, it is expected that a socio-economic information network will be set up during 1983.

Recently, IDRC has also approved support for ESCAP to establish a current awareness publication, Development Planning Newsletter, whose aim is to provide development planners, policy makers, researchers and other interested parties both inside and outside the region with regular access to information on recent developments in the field of development planning in the ESCAP region. It would be comprised of short journalistic articles emphasizing the dissemination rather than the analysis of information. The first issue is scheduled for December 1982.

The Economic Commission for Western Asia (ECWA) sent a proposal to IDRC for technical and financial

assistance in the establishment of an Arab Regional Documentation Centre for Economic and Social Development (ARDCES) or DEVSIS-Western Asia. This proposal was based on two consultants' reports that studied the feasibility of ARDCES. Further action has been hindered by the situation in the Middle East.

For a country to be a responsible participant in a cooperative information system, such as those described previously, it must possess a strong information infrastructure. IDRC provides support to selected developing countries to enable them to gain bibliographic control of the information produced in their countries, thus allowing them to become effective partners in regional networks.

For the past three years, IDRC has given some financial support to the operation of the Development Information System (DIS), a DEVSIS-type activity in the Information Systems Unit of the United Nations Department of International Economic and Social Affairs. A data base of some 5,000 unpublished UN documents has been compiled and from it Development Information Abstracts (DIA) (22) is generated.

IDRC convened the Technical Meeting on Common Methodologies in Ottawa and Mont Ste. Marie in November 1981 at which several of the organizations and institutions operating DEVSIS-type systems, especially those within the UN family, agreed upon methodologies for bibliographic description and indexing. The output of this meeting will be a three volume collection, Recommended methods for development information systems. The first volume, Manual for the preparation of records in development-information systems (23), has already been published. Volumes two and three, currently in preparation, will cover specific technical questions including creation and maintenance of authority files, serials control, thesaurus maintenance as well as indexing theory and procedures.

All of these activities serve to improve the bibliographic control of the socio-economic literature of developing countries and allow planners and researchers to have access to citations relevant to their needs. This alone is not sufficient. It is extremely frustrating to retrieve citations to what appear to be interesting documents but to have no means of acquiring copies of the items themselves. Therefore, each of the operations mentioned has a document delivery component and will supply on request copies of all unclassified, non-conventional documents indexed in the system. These are usually on microfiche as it is cheaply duplicated, is easily stored,

and can be airmailed. Thus, these systems are becoming a major source of socio-economic information for users not only in their respective regions but around the world.

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ABSTRACT

Development is one of the most important missions facing the world in the third quarter of the 20th century, yet no global systematic attempt has yet been made to provide information support to those responsible for economic and social development. Those least served and most in need of information support include development planners and policymakers in developing countries and in development-aid organizations.

In 1975, the DEVSIS Study Team prepared a study of the needs of the development community and concluded that the only way to provide comprehensive, continuous, and reliable service was to establish a cooperative international system whereby each country and each international organisation accepts the responsibility to identify and record information about the literature generated within its own territory.
It also proposed that a central unit be established within an international organization to merge inputs and provide comprehensive output services in printed and machine-readable form.

DEVSIS, as envisioned by the Study Team, has not been implemented. Instead, a loose network of national and regional development information systems is evolving. This article outlines the origins and operations of these DEVSIS-type systems and the services they provide.

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University of Stirling, Scotland

INFORMATION EXCHANGE IN A NORTH-SOUTH CONTEXT: IS THERE MORE TO GAIN THROUGH COOPERATION THAN IN TRYING TO ESTABLISH NEW MARKETS?

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The title of this first session of the 56th Aslib Conference begins with the words "The Competitive World...". I do not deny that, within the more industrialized countries, the provision of information services is becoming an increasingly competitive business. Nor do I deny that this competition has benefits for the consumer. If it were not for the competition from people with new ideas, our information services might well have stayed in fairly traditional moulds. Countries that are richer, in human resources and in technology, can afford a pluralistic approach despite the inevitable inefficiency that results when the same information is processed for different, uncoordinated systems and when users need to go to multiple sources to fulfill their needs. We pay for these "inefficiencies" through higher prices, but we recognize that they are probably more than offset by the benefits of competition which appear in the form of "better", that is, more responsive, forms of service.

But there are vast areas of the world where human society lacks the resources to emulate this experience. In what we call the developing countries, the technological infrastructure is far too weak to permit the development of competing services, even of a more traditional kind. If libraries lack photocopying machines and telex, if inter-city telephone communications are unreliable, and if the postal services lose almost as much as they deliver, even the concept of interlibrary loans is a dream for the future rather than a reality for the present. Some developing countries do enjoy a resource in the form of trained people, and countries like India have made great strides in employing this resource effectively;

but many other developing countries lack schools for the training of information manpower, and the few persons who get trained abroad are often lost from the national scene (the brain-drain effect, as well as the loss of individuals through promotion to work that is no longer in the information-service sector).

Often the suppliers of commercial information services in the more developed countries imagine that there is a market to be exploited in the developing countries. This view is quite often reinforced by senior people from the developing countries who, recognizing that their progress is impeded through lack of access to modern information, encourage the suppliers to make exploratory forays on distant shores. But, after some years of this type of interaction, we see a very small export market for information services from the developed to the developing countries.

Some of the reasons are quite obvious. A commercial supplier needs to be paid. Prices that appear reasonable in, say, the United Kingdom are astronomical in Bangladesh. And what is more, the prices need to be paid in foreign exchange, something which is in dreadfully short supply and which, even when it can be obtained, requires a lengthy bureaucratic procedure.

But there are more subtle reasons as well. Where there is no domestic information industry, there is little skill in handling relations with a foreign information industry. Here in Britain, you can manage your relations with the American and continental European information suppliers, because you have a domestic information industry and you can judge the relative cost-benefits of the different services in the range that is being offered. A country that has no domestic information industry can literally be victimized when its only possibilities are to depend on foreign suppliers.

Also the supplier becomes discouraged. Developing a new market requires making an investment, but putting salesmen on airplanes is becoming increasingly expensive, and there is always a need for

SCIENTIFIC JOURNALS

Figure 1

Subscription Sales in Industrialized and Developing Countries

Paid Subscriptions	Industrialized Countries*	Developing Countries
Canadian Journals of Research (10 titles)	93.10%	6.90%
A Major United States Publisher (65 titles)	95.82%	4.18%

*Consists of OECD countries, Eastern European countries, and South Africa.

Paid Subscriptions	India	OPEC countries	Brazil	Korea	Israel	All other Dev. countries	Total Developing countries
Can. Journals of Research (10 titles)	1.92	0.76	0.64	0.58	0.30	2.70	6.90%
A Major US Publisher (65 titles)	0.74	0.38	0.43	0.48	0.49	1.66	4.18%

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follow-up investments in such things as the training of users. These investments can be continued only if a sufficiently large business develops. As long as the business remains small, the investments represent a very heavy overhead on the few sales that are made. An initial enthusiasm on the part of potential clients tends to dissipate quickly when, confronted with a surfeit of bibliographic references, the clients find themselves unable to get the documents that have been drawn to their attention.

It is my contention that a "market", in the commercial sense of that term, barely exists in the developing countries. I do not have access to figures for the present sales by major on-line information suppliers. Clearly it is not zero because, for example, major cities in Mexico are now linked to the North American telephone network (and to packet-switching) and, since Mexico has been going through a rapid process of industrialization following its oil discoveries, it makes some use of the on-line commercial services from the United States. But this is only one country and it is a close neighbour. For the majority of the developing countries, such use of foreign information suppliers is just not happening. So, instead of looking at the market for these more modern services, let us just take a few figures for the market of a much more traditional form of information supply - the scientific journal.

The National Research Council of Canada supports the production of a range of national scientific journals covering most of the major disciplines. I have been permitted to have access to its sales statistics. A major United States publisher (one that prefers to remain anonymous) has also kindly provided similar data. After analyzing the subscriptions by country, my colleague, Ronald Archer, has produced the chart shown in Fig. 1.

Both the Canadian and the US publisher have been in business for decades. Their products are well known and are frequently cited in the scientific literature. Their markets have stabilized. And yet these numbers clearly show that total sales in more than half the countries of the world are so small as to be almost insignificant.

Often I wonder whether there is not a deeper underlying factor: to what degree is "our" information relevant to "their" information needs? The people in the developing countries with whom we relate in discussions of information needs are often themselves people who have studied in Europe or North America. Or they come from that enormous population that has been taught to follow "Western" values in local schools and universities that have grown out the colonial experience. They see the economic development and the standard of living that we have been able to achieve; they try to emulate our experiences and to benefit from the information we are generating. But much of the information that we generate is of material relevance only in our social, economic and technological environment. How important is cancer research to a society where the average expectation of life is only 50 years? To the elite, yes. And it is to the elite that we listen. But the real structure of demand for that information is very shallow: a few researchers who seek to continue the work that they started as doctoral students in a Western university; or a few doctors practising for a rich, powerful, but not very large clientele in the capital cities.

And yet there is a vast information need. How do you organize a system of health-care delivery for teeming populations in rural areas where there are no doctors trained in modern medicine? or in the slums that surround most major urban centres? for people whose per-capita incomes are no more than 100 GBP/year? Such information does exist. It has been produced by developing countries themselves in grappling with their own problems. But that information, if it is recorded at all, is in the form of typewritten or mimeographed reports sent to a few offices in the national - more often provincial - civil service. Much of the experience has never been recorded. Certainly only an infinitesimal portion of it finds its way to MEDLARS or to Excerpta Medica. For the real health problems of the poorer countries, our data bases are quite inadequate.

Our data bases are designed to respond to our needs. Some of what is there is certainly of

value to developing countries. And delegates at international conferences plead for action to speed the process of technology transfer. But our data bases often do not contain what would be of most interest and most value to developing countries - which is the information that they have themselves produced.

We cannot blame the data-base compilers in Western countries for failing to include reports on health-care experiences in the State of Uttar Pradesh. There is no market here for that type of information. So are we faced with such a division of interests and needs that we have to go separate ways? Should the industrialized countries go one way, and the developing countries be left to find their own solutions? In my view, that would be a simplistic conclusion and one that is not substantiated by the facts. The World is not really divided into two distinct groups, the rich and the poor. There is a fairly well distributed scatter of countries along the spectrum from rich to poor. And countries are neither homogeneously rich nor homogeneously poor. We in the West have situations where a local lack of resources results in a socio-economic situation that more closely resembles that of the Third World. The Third World has its local situations where a combination of resources and entrepreneural initiative leads to rapid industrialization.

There is also the moral imperative. We share most of the same genes as well as the same planet. Our societies are economically interdependent, as we all saw in 1973 at the time of the changes in oil prices. We are socially interdependent: a war or revolution anywhere now has global repercussions. And culturally too, we have seen how artistic expression is enriched through exposure to alien forms and concepts. What happens in Ecuador has an impact in Scotland, and we diminish our lives if we ignore it.

If we are to accept our responsibilities as citizens of a global community, we need to have a better understanding of what is happening in the developing countries. If we are technologists, we need to know what technical problems are confronting

the people who are trying to improve the supply of goods and services in those other parts of the world, and to involve ourselves in the identification of solutions that will be appropriate to the material and human resources available there. If we are social scientists, we need to better understand the problems that exist within developing countries before we can define options for more effective relationships between developing and industrialized countries. Too often we rely on the perceptions of our own scientific community as to what is happening in the developing countries. Indeed, our data bases are very fruitful if we want to know what developed-country scholars think of the situations in the Third World. But we have very little access to what developing-country scholars are saying about their own home environments.

So one must ask whether there are grounds for believing that we can set up mechanisms that will produce an effective information exchange among the societies all along the spectrum from rich to poor. If we can do so, we shall be responding to the aspirations that have been expressed in countless international meetings and that have been enshrined in various declarations, such as that calling for a New International Economic Order. In so doing, perhaps we can make our own small contribution to global understanding and to a more equitable distribution of the benefits to be obtained from the world's resources. But clearly, we must try to prescribe solutions that do not take away from what has already been achieved in the industrialized countries: we must guard the advantages that derive from competitive initiatives in those countries that can afford to follow a market economy.

I believe we do have models that are appropriate: models that are based on a formula for equitable work-sharing, that deliver the products at prices that all can afford, and that stimulate, not stifle entrepreneurship.

I am referring to what we often generically call the "Cooperative International Information Systems" which I can illustrate by specific reference to AGRIS - the system managed by FAO to cover the

agricultural sciences and technologies. The concept is one that could be applied with a discipline-oriented approach, but a mission-oriented approach is probably more likely to be successful. "Missions", more than "disciplines", are identifiable with government departments or institutions; hence, activities that correspond to missions can more easily invoke the allocation of public money. Also, most of our international intergovernmental organizations are structured to undertake mission-oriented programs (FAO for agriculture, WHO for health, ITU for communications, IAEA for peaceful uses of atomic energy, etc.). By contrast, if we try to promote international cooperation in discipline-oriented subject areas, we are likely to be dependent on national and international professional associations that are much less well endowed.

The formula that has been adopted for AGRIS is one that calls for each country to report the new information that has been published on its own territory. Indeed, this is the price of admission to the system. But it can be paid by employing one's own nationals at local salaries to do a job that needs to be done in any nation - to make an inventory of the agricultural information that is put out by one's own publishers. The job can be done by public employees working for, say, the Ministry of Agriculture, or the Government can contract the work out to a university or to an institution in the private sector. FAO and the other participating countries make no restrictions other than that the AGRIS methodology be followed. And that methodology is one that has been established by consensus among the participating countries with the technical support of the FAO Secretariat.

In return for paying this price, each participating country has the right to receive a copy of the data base that FAO produces by merging the contributions from all the participants. That data base can be obtained both in the form of a printed bibliography published monthly, or in the form of updates on magnetic tape to the accumulated set of records - which, incidentally, is now getting very close to one million items. The participant acquires the data base free of charge and can choose for himself how it is to be

exploited on his own national territory. Hence, a government can choose to put it up, in whole or in part, on a computer in the Ministry of Agriculture (as, for example, has been done in Tunisia), or the Government can make it available to one or more private entrepreneurs who then may sell on-line searching and SDI services.

Such a data base can be exceedingly rich in the way it reflects the information that is being produced in all countries. National organizations have the best possibilities for acquiring the information produced in their own countries. All of us know the difficulties that are encountered when one embarks on a program to make a comprehensive collection of information in a given field from all over the world - even when the field is quite narrow. For something as broad as "agriculture", even an organization with the resources of the US National Agricultural Library admits that it cannot establish relations with all the sources in other countries, particularly as much of what is produced today is in the form of "non-conventional literature" (technical reports, conference papers, theses, etc.).

When, as in the case of AGRIS, both industrialized and developing countries are participating in a common system, each has a window on the other's production. Each has equal right to a copy of the entire data base (and, of course, each is free to discard those records that it may consider to be irrelevant to its own needs). Each has an equal voice in the overall management of the system. Each pays, by providing input, at a rate which is determined by the level of information production within its own society - a rate which probably also roughly matches the rate of information consumption (producers of information are also the main consumers of information in the same subject area). To the extent that the FAO budget needs to be augmented to manage the AGRIS operation, all countries contribute according to the United Nations normal assessment formula, which is calculated according to each country's ability to pay.

So I would submit that, in the AGRIS model, we have found a formula for information-sharing which

responds to global needs and puts no country in a position of dependency. The main deficiency at present is that AGRIS still lacks an effective document-delivery component to back up the bibliographic citations contained in its data base. Some progress has been made, particularly by regional institutions that have been acting between the national participants and FAO itself. For example, the Inter-American Institute for Agricultural Cooperation (San José, Costa Rica) has introduced a coupon system that facilitates the delivery of documents cited in AGRIS by Latin American countries - the purchaser pays, and the vendor receives, each in his own national currency. On a global basis, the International Nuclear Information System (INIS), which is managed by the International Atomic Energy Agency, has instituted mechanisms by which all non-conventional documents recorded in the data base are acquired and put on to microfiches, and copies are then sold against payments in local currencies. INIS, like AGRIS, is an international cooperative information system operating on the same "territorial formula".

It is true that systems like INIS and AGRIS have caused anxiety to entrepreneurs who fear that such developments may compete unfairly with their own efforts. I submit, however, that such anxieties are ill-founded and, indeed, that the availability of such data bases gives new opportunities for entrepreneurial activity to serve a domestic market. Nowhere can one find a governmental or private organization that, alone, could find the resources to construct a data base with anything like the content of AGRIS. We all know that the most expensive component of an information operation is the capture of the input data. In AGRIS, that is done for us by the participating countries. And, in any country, the government could make the data base available to one or more entrepreneurs who could then compete with each other (and with foreign suppliers) in offering service out of that data base and in refining the process of document delivery. Why should an entrepreneur waste money in recapturing data that has already been captured more comprehensively than he could ever hope to do so? His clients are interested only in what he can deliver.

So, in conclusion, I see the cooperative international information system as a mechanism which provides for effective North-South collaboration on the basis of equity and as one that helps the suppliers of information services, whether public or private, to augment the inventory of material that they offer to their clients. Hence, we should welcome it rather than fear it. There is great scope for extending the model into other subject areas, and I would suggest that public health might be one of the prime candidates. And the formula does not necessarily require the participation of governments with management entrusted to an intergovernmental organization. In more specialized subject fields, the formula could be applied in any worldwide network of institutions with common interests. My own organization, for example, is working with other research-funding agencies to establish a cooperative information system that will give data on the various research projects that they have been supporting. Each will report his own projects, but then each will have access to data on the projects supported by all the others.

Within the next few years, we can be assured that all capital cities will be linked by telecommunications permitting the transfer of large volumes of data at very low cost. We have choices to make in how we use those new facilities. One way would be to speed up the process by which input is made to cooperative information systems and by which new increments to the data bases are distributed to information suppliers. Each supplier could then tailor his services according to local needs and what his clients are prepared to buy. This, in the long run, is likely to be a more acceptable choice than one that requires clients to conduct their searches on host computers located only in Europe and North America. What could be lost to the information supplier in Europe or North America is a very small potential market in the developing countries; what could be gained is a potentially vast amount of data on which to base improved services to the more profitable markets in the industrialized centres. For the developing countries, of course, it gives them a chance to progressively improve their own information services without a drain on foreign exchange.

The challenge that the developing countries pose to the industrialized countries when they demand a more equal partnership in the information sector is a challenge that modern technology permits us to meet. In responding to that challenge, we can gain access to information that has developed from perspectives quite different from our own (thus enriching our knowledge of the world). And we can do this without damaging the advantages that we have gained by encouraging competition among information suppliers.

23.

10 YEARS EADI-DOCUMENTATION WORKING GROUP 1973-1983

1973: 06.09. First talks with OECD (Julio Fossi)

1974: Preparation meetings in Berlin and Paris

1975: 19.04. EADI preparation meeting in Paris

11.09.-13.09. General Conference in Linz

11.11.-12.11. Conference in Bonn
Topics:
Country Reports
Exchange of Publications
Register of Current Research
Register of Institutions
Register of Events
Decisions:
Regular meetings (incl. training)
Regular newsletter
Preparation of Devsis
Use of DSE "Calendar" (events)
Invitation of guests (clearing houses)

1978: 03.04.-05.04. Conference in Berlin
Topics:
Preparation for Milano Conference 1978 (19.09.-22.09.)
OECD/DC Research Register (Dev. Studies)
List of National Aid Administrations
List of National Doc. focal points (EC)

1979: 12.02.-23.02. Training Course with PROGRIS in Berlin
Topics:
User Analysis
Problems of acquisition of material
Indexing and data processing
Evaluation
Use of EURONET

1981: 12.11.-14.11. Budapest General Conference

16.11.-17.11. Bonn Conference of the Working Group
Topics:
Standardization of Registers (Paris 1981)
Updating Country Reports
Cooperation with EADI secretariat
Exchange of Publications with Overseas
DEVSIS development
Cooperation with other regional associations
Systems of research reporting/dissemination
Directory of European I&D Institutions

	Low-cost documentation systems IDS plans directory of directories Problems of small information centres and libraries
1982: 01.11.-05.11.	Material for Area Orientation courses
1983: 09.10.-14.10.	Conference in Berlin.

D. Danckwortt

GERMAN FOUNDATION FOR INTERNATIONAL DEVELOPMENT

- Documentation Centre -

Hans Böckler Straße 5, D - 5300 Bonn 3, Ph. 0228/40010

INFORMATION ON DEVELOPMENT POLICY

The DSE Documentation Centre collects German and foreign literature on development policy of the industrialized countries and international organizations, on development theories and -programmes, and on development problems of Third World countries.

Furthermore, in central card files, data and facts are being collected on:
- German development aid institutions
- German language research works on development policy and developing countries
- events in the field of development policy at home and abroad.

The information in all fields of collection is given on request or by publication of bibliographies and selected lists.

Additionally, information is provided (on request) on problems of developing countries, on organization, aims and performance of development assistance and on facts and data related to specific Third World countries. A fee has to be raised for more comprehensive compilations of material.

DSE is co-editor of the following periodical publications:

HANDBOOK ON INTERNATIONAL COOPERATION (loose-leaf edition). Editor: Association for International Cooperation (VIZ), Bonn 2. Published by Nomos Verlagsgesellschaft, Baden-Baden (FRG) about 10 supplementary installments p.a. / Annual subscription DM 600,- . Basic edition in 12 files, at present about 10.000 pages, DM 180,--.

EXCHANGE. Information Service. Short notes on the international exchange of managers, students, practitioners, pupils, youth groups, foreign workers. Editor: Association for International Cooperation (VIZ), Bonn 2. Published by Nomos Verlagsgesellschaft, Baden-Baden (FRG). Annual subscription DM 30,--.

PUBLICATIONS

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LITERATURE	SELECTED BIBLIOGRAPHIES on about 60 topics (list to be ordered). Free of charge up to 3 copies. For each further copy the fee is DM 2,50 RECENT ACQUISITIONS. Bi-annual lists of recent acquisitions of the DSE Library (with descriptors and indexes). Free of charge.

Information on	Title
RESEARCH	BIBLIOGRAPHY OF GERMAN RESEARCH ON DEVELOPING COUNTRIES with annotations. Published annually. Fee DM 20,--.
INSTITUTIONS	GERMAN PARTNERS OF DEVELOPING COUNTRIES. Directory of German institutions. Published by Nomos Verlagsgesellschaft, Baden-Baden (FRG), 1979, 248 pages. DM 19,-- (to be obtained via the bookselling trade only). GERMAN PARTNERS OF DEVELOPING COUNTRIES. Selected addresses. Bonn 1981. 45 pages. Order No. DOK 281/81. Published annually. Free of charge. COOPERATION WITH DEVELOPING COUNTRIES IN THE FEDERAL REPUBLIC OF GERMANY - an organizational review by Dieter Danckwortt, Bonn 1978. 34 pages. Order No. DOK 356. Also available in English and French. Free of charge. WORKING OVERSEAS. Directory of institutions in the field of personnel cooperation. Date: September 1979. 48 pages. Order No. DOK 66. Free. THIRD WORLD STUDIES. Register of University institutes teaching development-related subjects at graduate and postgraduate level in the FRG and Berlin (West). 2nd edition 1980. 45 pages. Order No. DOK 1018. Free of charge. AGRICULTURAL COOPERATION WITH DEVELOPING COUNTRIES. Directory of German institutions in the field of agriculture, forestry, co-operatives, food, veterinary science. Bonn 1982. 185 pages. Order No. DOK 1047. Fee DM 5,--.
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OTHER PUBLICATIONS	LEAFLETS. Information on development policy for students and teachers. Free of charge. TASKS AND METHODS OF THE DSE DOCUMENTATION CENTRE. Bonn 1980. 34 pages. Order No. 355/80. Also available in English, French and Spanish. Free of charge.

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